Farrell Fritz, P.C.

1320 RXR Plaza
Uniondale, New York 11556-1320
Telephone 516.227.0700
Fax 516.227.0777
www.farrellfritz.com

**Charlotte A. Biblow**
**Partner**

Direct Dial 516.227.0868
Direct Fax 516.336.2266

Our File No.
16606-100

September 26, 2013

**Via Federal Express**
Beverly Kolenberg, Esq.
Assistant Regional Counsel, Office of Regional Counsel
US Environmental Protection Agency
290 Broadway, 20th Floor
New York, NY 10007-1866

**Re: Grand Machinery Exchange, Inc.**
**New Cassel/Hicksville Superfund Site**

Dear Ms. Kolenberg:

As you know, we represent Grand Machinery Exchange, Inc., (Grand Machinery Exchange). Enclosed please find Grand Machinery Exchange's response to the US Environmental Protection Agency's Request for Information, which includes a CD containing responsive documents.

Very truly yours,

Charlotte Biblow

Charlotte A. Biblow

CAB/me
Enclosures

Cc: Jennifer LaPoma (via federal express)(w/enclosures)
Remedial Project Manager, Emergency and Remedial Response Division
US Environmental Protection Agency
290 Broadway, 20th Floor
New York, NY 10007-1866

Paul Merandi (w/enclosures)

241142

Interwoven\3266188.1

**RESPONSE OF GRAND MACHINERY EXCHANGE, INC. TO THE US ENVIRONMENTAL PROTECTION AGENCY'S REQUEST FOR INFORMATION**

1. a. *State the correct legal name and mailing address of your Company.*

Grand Machinery Exchange, Inc.
1765 Expressway Drive North
Hauppauge, NY 11778

b. *State the name(s) and address(es) of the President, Chief Executive Officer and the Chairman of the Board (or other presiding officer) of the Company.*

Larry Goodman is the President.

c. *Identify the state and date of incorporation of the Company and the Company's agents for service of process in the state of incorporation, and in New York State.*

Grand Machinery Exchange, Inc. is a New York State corporation and was incorporated on or around October 28, 1927. It has no agent for service of process.

d. *If your Company is a subsidiary or affiliate of another corporation or entity, identify each of those other corporations or entities and for each, the President, Chief Executive Officer and Chairman of the Board. Identify that state of incorporation and agents for service of process in the state of incorporation and in New York State for each corporation identified in your response to this question.*

Grand Machinery Exchange, Inc. has no affiliates or subsidiaries.

2. *Identify the address, Section, Block and Lot numbers, and the size of each property (hereinafter, "Property" or "Properties") that your Company either presently owns and/or formerly owned within the Site from the date your Company, or any related company had an ownership interest. (See Definitions section for terms.)*

Grand Machinery Exchange, Inc. is the owner of 36 Sylvester Street, Westbury, NY 11590 (the "Property"). Its Nassau County Tax Map number is Section 11, Block 077, Lots 21-24 and 56-59. The Property is 0.4591 acres.

3. *For each Property identified in response to question 2. in which your Company has and/or had an ownership interest currently or in the past, please identify:*

a. *The date your Company acquired an ownership interest. An ownership interest includes, but is not limited to, fee owner, lessor or lessee, licensee and/or operator;*

Grand Machinery Exchange, Inc. purchased the Property on March 11, 1957.

b. *The name and address of all other currently and/or previous owners;*

Grand Machinery Exchange, Inc. currently owns the Property. It purchased the Property on March 11, 1957 from Israel G. Halpert, as Trustee in Bankruptcy of the Estate of Anchor Slide Fastener Corp.

c. *All individuals or entities that have leased, subleased or otherwise operated at each Property at any time currently or in the past, and identify the dates (month and year) that each such individual or entity began and ended its leasehold interest or its operations;*

Grand Machinery Exchange, Inc., has never operated at the Property.
Tenants and/or occupants of the Property include:

Tishcon Corp. (1993-present)
American Express Field Warehouse Corp.
Universal Transistor Products Corp.
National Gear Products (stopped operating at the Property around 1991)

d. *Any portion of any Property which was transferred or sold, and the block and lot number, the date of the transfer or sale, the sale price and the entity that acquired the Property;*

Grand Machinery Exchange, Inc. currently owns the Property.

e. *The relationship, if any, between your Company and each of the individuals and/or other entities identified as having leased or operated at each Property;*

Grand Machinery Exchange, Inc.'s relationship to the Property has only been as a landlord.

f. *Your Company's involvement in all operations conducted by each lessee and/or other individual or entity identified in response to question 3c., above; and*

Grand Machinery Exchange, Inc. had and has no involvement in the operations conducted by the lessees or other occupants.

g. *For each Property, provide all documents relevant to your responses to questions 3a. – 3f., above, and provide copies, including, but not limited to, copies of surveys, title search documents, deeds, rent rolls, leases and correspondence.*

See attached deed and leases.

4. *Provide copies of all maps, building plans, floor plans and/or drawings for each Property identified in response to questions 2., above. Your response to this question should include, but not be limited to, providing plumbing and drainage system plans for all structures on each Property.*

To the extent Grand Machinery Exchange, Inc. has responsive documents, they are included as figures in the attached documents.

*For both current (if still in operation) and past operations during the period of time that the Company was at a Property, please identify and provide a description of the following:*

Grand Machinery Exchange, Inc. never conducted any operations at the Property.

a. *all surface structures and features (e.g., buildings, above-ground storage tanks, paved, unpaved areas and parking lots, and dates when paved areas were paved);*

Grand Machinery Exchange, Inc. never conducted any operations at the Property. To the extent Grand Machinery Exchange, Inc. has responsive documents, they are included as figures contained in the attached documents.

b. *all past and present plumbing systems, above and below-ground discharge piping, sumps, storm water drainage systems, sanitary sewer systems, septic tanks, dry wells, subsurface disposal fields, and underground storage tanks; and*

Grand Machinery Exchange, Inc. never conducted any operations at the Property. To the extent Grand Machinery Exchange, Inc. has responsive documents, they are included as figures contained in the attached documents.

c. *all currently existing and previously existing chemical and industrial hazardous substance storage, transfer, spill and disposal areas.*

Grand Machinery Exchange, Inc. never conducted any operations at the Property. To the extent Grand Machinery Exchange, Inc. has responsive documents, they are included as figures contained in the attached documents.

5. *For each Property identified in questions 2., above, at which your Company conducted operations, describe in detail the manufacturing processes and/or other operations that your Company conducted at the Property, and identify the years during which your Company conducted operations there. If those operations were not constant throughout your company's operations, describe the nature of all changes in operations, and state the year of each change. If detailed information about your Company's operations is not available, provide, at a minimum, a general description of the nature of your Company's business at the Property, the years of operation, the type of work your Company conducted, and the number of employees for all the operations.*

Grand Machinery Exchange, Inc. never conducted any operations at the Property.

6. *With respect to industrial wastes at a Property:*

a. *List all industrial wastes that were used, stored, generated, handled or received by your Company at the Property. Your response to this questions should include, but not be limited to, use, storage, generation and/or handling of trichloroethylene ("TCE"), tetrachloroethylene ("PCE"), 1,1,1-trichloroethane ("1,1,1-TCA") and other chlorinated or non-chlorinated solvents. Be as specific as possible in identifying each chemical, and provide, among other things, the chemical name, brand name, and chemical content;*

Grand Machinery Exchange, Inc. never conducted any operations at the Property and never used, stored, generated, handled or received industrial waste at the Property.

b. *State when each industrial waste identified in your response to question 6a., above, was used, stored, generated, handled or received, and state the volume of each industrial waste used, stored, generated and/or handled on an annual basis; and*

Grand Machinery Exchange, Inc. never conducted any operations at the Property and never used, stored, generated, handled or received industrial waste at the Property.

c. *Describe the activity or activities in which each industrial waste identified in your response to question 6a., above, was used, stored, handled or received.*

Grand Machinery Exchange, Inc. never conducted any operations at the Property and never used, stored, generated, handled or received industrial waste at the Property.

7. *Describe in detail how and where the industrial wastes identified in response to question 6., above, were disposed. For each disposal location and method, state the nature and quantity of the material disposed of on an annual basis. For those time periods when a precise quantity is not available, provide an estimate.*

Not applicable. See response to question 6.

8. *Describe in detail any knowledge your Company has about intentional or unintentional disposal of industrial wastes at each Property identified in response to question 2., above, including, but not limited to, TCE, PCE and/or other chlorinated or non-chlorinated solvents or wastes containing such solvents, at any time currently or in the past. Your response should include instances in which industrial wastes were spilled or otherwise disposed onto or into the floors or the ground from septic systems, pipes, drains, drums, tanks, or by any other means. Provide copies of all documents relevant to your response.*

Grand Machinery Exchange, Inc. never conducted any operations at the Property and never used, stored, generated, handled or received industrial waste at the Property. There is no evidence of groundwater contamination originating from the Property. See attached documents.

9. *Identify all leaks, spills, or releases of any kind of any industrial wastes (including, but not limited to, TCE and PCE or other chlorinated or non-chlorinated solvents or wastes containing such solvents) into the environment that have occurred, or may have occurred, at or from the Property, including any leaks or releases from drums and other containers. Provide copies of all documents relevant to your response.*

Grand Machinery Exchange, Inc. never conducted any operations at the Property and never used, stored, generated, handled or received industrial waste at the Property. There is no evidence of groundwater contamination originating from the Property. See attached documents.

10. *Explain whether any repairs or construction were implemented to address any leaks, spills, releases or threats of releases of any kind, the nature of the work and the dates of any such work. Provide copies of all analyses, characterizations, environmental*

*assessments or studies or any report or other description of any investigations, removal actions, remedial activities, or any other work conducted by your Company or by any other party on your Company's behalf relating to industrial wastes released at or from the Property and/or the Site. If any copies of the records requested in this question are available electronically, kindly submit your answer to this question on a disk.*

Grand Machinery Exchange, Inc. never conducted any operations at the Property. There is no evidence of groundwater contamination originating from the Property. Grand Machinery Exchange, Inc. conducted environmental investigations and remedial activities at the Property. See attached documents.

11. *Provide copies of all insurance policies held and indemnification agreements entered into by the Company which may potentially indemnify the Company against any liability which it may be found to have under CERCLA for releases and threatened releases of hazardous substances at and from the Property. In response to this request, please provide not only those insurance policies and agreements which currently are in effect, but also those that were in effect during any portion of the time the Company conducted operations at, or held a property interest at the NCIA. Your response should also identify the specific Property related to each policy and/or agreement.*

Grand Machinery Exchange, Inc. is not aware of any such insurance policies. As noted above, Grand Machinery Exchange, Inc. never conducted any operations at the Property.

12. *State the names, telephone numbers and present or last known addresses of all individuals whom you have reason to believe may have knowledge, information or documents regarding the use, storage, generation, disposal of or handling of industrial wastes at the Site, the transportation of such materials to the Site, or the identity of any companies whose material was treated or disposed of at the Site.*

Grand Machinery Exchange, Inc. does not know of any such individual.

13. *If you have information or documents which may help EPA identify other companies that conducted operations, owned property, or were responsible for the handling, use, storage, treatment, or disposal of industrial wastes that potentially contributed to chlorinated solvent contamination at the Site, please provide that information and those documents, and identify the source(s) of your information.*

Grand Machinery Exchange, Inc. never conducted any operations at the Property. To the extent Grand Machinery Exchange, Inc. has such information, it is included in the attached documents.

14. *Please state the name, title and address of each individual who assisted or wad consulted in the preparation of your response to this Request for Information. In addition, state whether each such person has personal knowledge of the answers provided.*

Paul Merandi, Treasurer
Grand Machinery Exchange, Inc.
1765 Expressway Drive North
Hauppauge, NY 11778

## CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

State of New York

County of Suffolk

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information regarding the New Cassel/Hicksville Site) and all documents submitted herewith, and that I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I am also aware that I am under a continuing obligation to supplement my response to EPA's Request for Information if any additional information relevant to the matters addressed in EPA's Request for Information or my response thereto should become known or available to me.

Paul Merandi
NAME (print or type)

Treasurer
TITLE (print or type)

SIGNATURE

Sworn to before me this
23rd day of September, 2013.

Savina M. Indelicato
Notary Public

SAVINA M. INDELICATO
Notary Public, State of New York
No. 01IN6055602
Qualified in Nassau County
Commission Expires Feb. 26, 2015

DEED 6180 PAGE 595

THIS INDENTURE made the *11th* day of March, 1957, between ISRAEL G. HALPERT, as Trustee in Bankruptcy of the Estate of ANCHOR SLIDE FASTENER CORP., bankrupt, and not individually or personally, having his office at 11 Park Place, in the Borough of Manhattan, City of New York, *and residing at 100 Avenue P, Brooklyn, New York* party of the first part, and GRAND MACHINERY EXCHANGE, INC., a New York corporation having its principal office and place of business at 215 Centre Street, in the Borough of Manhattan, City of New York

I.R.S. $ *198.00*

WITNESSETH: That the party of the first part, in consideration of *one hundred eighty thousand dollars (\$180,000.00)*

lawful money of the United States, paid by the party of the second part, *and pursuant to order of Referee in Bankruptcy dated February 11, 1957* do hereby grant and release unto the part of the second part, and its assigns forever,

PARCEL "A"

ALL that certain plot, piece or parcel of land with the buildings and improvements thereon erected, situate, lying and being *New Cassel, Town of North Hempstead,* in the County of Nassau and State of New York, and more particularly known and designated as lots 32, 33, 34, 47, 48 and 49 in Block 77, on a certain map entitled "2nd Map of City of New Cassel, Queens County, L.I. N.Y., surveyed August 1891, by Wm.E. Hawxhurst, Surveyor, drawn by C.A.Leaf, C.E." and filed in the office of the Clerk of the County of Queens, April 22, 1892, under file No. 256, and filed in the Office of the Clerk of Nassau County under File No. 3, New No. 14, said lots when taken together as one parcel are bounded and described as follows:

BEGINNING at a point on the westerly side of New York Avenue, distant 650 feet southerly from the corner formed by the intersection of the westerly side of New York Avenue with the southerly side of Main Street; Running Thence westerly at right angles to the westerly side of New York Avenue, 100 feet; THENCE southerly and parallel with the westerly side of New York Avenue, 25 feet; THENCE westerly at right angles to the easterly side of Sylvester Avenue 100 feet to the easterly side of Sylvester Avenue; THENCE southerly along the easterly side of Sylvester Avenue, 75 feet; THENCE easterly at right angles to the easterly side of Sylvester Avenue, 100 feet; THENCE northerly and parallel with the easterly side of Sylvester Avenue, 25 feet; THENCE easterly at right angles to the westerly side of New York Avenue 100 feet to the westerly side of New York Avenue; THENCE northerly along the westerly side of New York Avenue, 75 feet to the point or place of beginning.

SAID PREMISES being known as and by the street number 18 Sylvester Street, Westbury, New York.

PARCEL "B"

ALL that certain plot, piece or parcel of land, with the buildings thereon erected, situate, lying and being at Westbury, outside of Incorporated Village, in the Town of Hempstead, County of Nassau and State of New York and more particularly known and designated as lots 21 to 24 both inclusive and lots 56 to 59 both inclusive in Block 77, on a certain map entitled, "2nd Map of City of New Cassel, Queens County, L.I. N.Y. surveyed August 1891 by Wm. E. Hawxhurst, Surveyor, drawn by C.A.Leaf, c.e.," and filed in the Office of the Clerk of the County of Queens, April 22nd, 1892, under File No.256, and filed in the Office of the Clerk of Nassau County under File No. 3, New No. 14, said lots when taken together as one parcel are bounded and described as follows:

BEGINNING at a point on the westerly side of New York Avenue, distant 400 feet southerly from the corner formed by the intersection of the westerly side of New York Avenue with the southerly side of Main Street; RUNNING THENCE southerly along the westerly side of New York Avenue, 100 feet; THENCE westerly at right angles to the westerly side of New York Avenue, 200 feet to the easterly side of Sylvester Street; THENCE northerly along the easterly side of Sylvester Street, 100 feet; THENCE easterly at right angles to the easterly side of Sylvester Street, 200 feet to the westerly side of New York Avenue, the point or place of beginning.

SAID PREMISES being known as and by the street 36 Sylvester Street, Westbury, New York.

TOGETHER with the appurtenances and all the estate and rights of the party of the first part in and to said premises.

TO HAVE AND TO HOLD the premises granted unto the party of the second part and its assigns forever.

IN WITNESS WHEREOF, the party of the first part has hereunto set his hand the day and year first above written.

In presence of:

_______________________

Israel G. Halpern

Israel G. Halpern, as Trustee in Bankruptcy of the Estate of Anchor Slide Fastener Corp., bankrupt, and not individually or personally.

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.

On this 11th day of March, 1957, before me personally came ISRAEL G. HALPERT, to me known and known to me to be the individual described in, who executed the foregoing instrument, and he duly acknowledged to me that he executed the same.

Benj. Barondess
Notary Public

BENJAMIN H. BARONDESS
Notary Public, State of New York
No. 30-0160850
Qualified in Nassau County
Certificates filed in Offices of the
County Clerks and Registers of N.Y.
Bronx, Kings and Queens Counties

RECORDED
CLERK'S OFFICE
SAU COUNTY, N.Y.
J. FRANCKE, CLERK

2611824

126 MAR 13 1957. 6

X 525 13859

ISRAEL G. HALPERT, as Trustee
in Bankruptcy of the Estate of
Anchor Slide Fastener Corp.,
bankrupt

to

GRAND MACHINERY EXCHANGE, INC.

WARRANTY
DEED

Sec. 11 Block 77
Nassau County

RECORDED AT REQUEST OF
TITLE GUARANTEE AND TRUST COMPANY
RETURN BY MAIL TO
Archie F. Karman Esq
132 Nassau Street
New York City

DEED 6180 PAGE 598

GMEI-00004

L-3/86

**Agreement of Lease,** made as of this 1st day of December 19 93, between

GRAND MACHINERY EXCHANGE, INC.,

party of the first part, hereinafter referred to as OWNER, and TISHCON CORP.

party of the second part, hereinafter referred to as TENANT,

**Witnesseth:** Owner hereby leases to Tenant and Tenant hereby hires from Owner

in the building known as 36 Sylvester Street, Westbury, New York, 11590, County of Nassau ~~Borough of~~ , ~~City of New York~~, for the term of five (5) years

(or until such term shall sooner cease and expire as hereinafter provided) to commence on the 1st day of March nineteen hundred and ninety-Four, and to end on the 28th day of February nineteen hundred and ninety-Nine both dates inclusive, at an annual rental rate of

SEE SCHEDULE A ANNEXED HERETO AND MADE A PART HEREOF.

which Tenant agrees to pay in lawful money of the United States which shall be legal tender in payment of all debts and dues, public and private, at the time of payment, in equal monthly installments in advance on the first day of each month during said term, at the office of Owner or such other place as Owner may designate, without any set off or deduction whatsoever, except that Tenant shall pay the first monthly installment(s) on the execution hereof (unless this lease be a renewal).

In the event that, at the commencement of the term of this lease, or thereafter, Tenant shall be in default in the payment of rent to Owner pursuant to the terms of another lease with Owner or with Owner's predecessor in interest, Owner may at Owner's option and without notice to Tenant add the amount of such arrears to any monthly installment of rent payable hereunder and the same shall be payable to Owner as additional rent.

The parties hereto, for themselves, their heirs, distributees, executors, administrators, legal representatives, successors and assigns, hereby convenant as follows:

**Occupancy:** 1. Tenant shall pay the rent as above and as hereinafter provided.

**Use:** 2. Tenant shall use and occupy demised premises for vitamin and food supplement manufacturin and distribution, storage of raw material, work in process or* provided such use is in accordance with the Certificate of Occupany for the building, if any, and for no other purpose.

**Alterations:** 3. Tenant shall make no changes in or to the demised premises of any nature without Owner's prior writter consent. Subject to the prior written consent of Owner, and to the provisions of this article, Tenant at Tenant's expense, may make alterations, installations, additions or improvements which are non-structural and which do not affect utility services or plumbing and electrical lines, in or to the interior of the demised premises using contractors or mechanics first approved by Owner. Tenant shall, at its expense, before making any alterations, additions, installations or improvements obtain all permits, approval and certificates required by any governmental or quasi-governmental bodies and (upon completion) certificates of final approval thereof and shall deliver promptly duplicates of all such permits, approvals and certificates to Owner. Tenant agrees to carry and will cause Tenant's contractors and sub-contractors to carry such workman's compensation, general liability, personal and property damage insurance as Owner may require. If any mechanic's lien is filed against the demised premises, or the building of which the same forms a part, for work claimed to have been done for, or materials furnished to, Tenant, whether or not done pursuant to this article, the same shall be discharged by Tenant within thirty days thereafter, at Tenant's expense, by filing the bond required by law or otherwise. All fixtures and all paneling, partitions, railings and like installations, installed in the premises at any time, either by Tenant or by Owner on Tenant's behalf, shall, upon installation, become the property of Owner and shall remain upon and be surrendered with the demised premises unless Owner, by notice to Tenant no later than twenty days prior to the date fixed as the termination of this lease, elects to relinquish Owner's right thereto and to have them removed by Tenant, in which event the same shall be removed from the demised premises by Tenant prior to the expiration of the lease, at Tenant's expense. Nothing in this Article shall be construed to give Owner title to or to prevent Tenant's removal of trade fixtures, moveable office furniture and equipment, but upon removal of any such from the premises or upon removal of other installations as may be required by Owner, Tenant shall immediately and at its expense, repair and restore the premises to the condition existing prior to installation and repair any damage to the demised premises or the building due to such removal. All property permitted or required to be removed, by Tenant at the end of the term remaining in the premises after Tenant's removal shall be deemed abandoned and may, at the election of Owner, either be retained as Owner's property or removed from the premises by Owner, at Tenant's expense.

**Repairs:** 4. Owner shall m ntain and repair the exterior of and the public portic s of the building. Tenant shall, throughout the term of this lease, take good care of the demised premises including the bathrooms and lavatory facilities (if the demised premises encompass the entire floor of the building) and the windows and window frames and, the fixtures and appurtenances therein and at Tenant's sole cost and expense promptly make all repairs thereto and to the building, whether structural or non-structural in nature, caused by or resulting from the carelessness, omission, neglect or improper conduct of Tenant, Tenant's servants, employees, invitees, or licensees, and whether or not arising from such Tenant conduct or omission, when required by other provisions of this lease, including Article 6. Tenant shall also repair all damage to the building and the demised premises caused by the moving of Tenant's fixtures, furniture or equipment. All the aforesaid repairs shall be of quality or class equal to the original work or construction. If Tenant fails, after ten days notice, to proceed with due diligence to make repairs required to be made by Tenant, the same may be made by the Owner at the expense of Tenant, and the expenses thereof incurred by Owner shall be collectible, as additional rent, after rendition of a bill or statement therefor. If the demised premises be or become infested with vermin, Tenant shall, at its expense, cause the same to be exterminated. Tenant shall give Owner prompt notice of any defective condition in any plumbing, heating system or electrical lines located in the demised premises and following such notice, Owner shall remedy the condition with due diligence, but at the expense of Tenant, if repairs are necessitated by damage or injury attributable to Tenant, Tenant's servants, agents, employees, invitees or licensees as aforesaid. Except as specifically provided in Article 9 or elsewhere in this lease, there shall be no allowance to the Tenant for a diminution of rental value and no liability on the part of Owner by reason of inconvenience, annoyance or injury to business arising from Owner, Tenant or others making or failing to make any repairs, alterations, additions or improvements in or to any portion of the building or the demised premises or in and to the fixtures, appurtenances or equipment thereof. The provisions of this Article 4 with respect to the making of repairs shall not apply in the case of fire or other casualty with regard to which Article 9 hereof shall apply.

**Window Cleaning:** 5. Tenant will not clean nor require, permit, suffer or allow any window in the demised premises to be cleaned from the outside in violation of Section 202 of the New York State Labor Law or any other applicable law or of the Rules of the Board of Standards and Appeals, or of any other Board or body having or asserting jurisdiction.

**Requirements of Law, Fire Insurance, Floor Loads:** 6. Prior to the commencement of the lease term, if Tenant is then in possession, and at all times thereafter Tenant shall, at Tenant's sole cost and expense, promptly comply with all present and future laws, orders and regulations of all state, federal, municipal and local governments, departments, commissions and boards and any direction of any public officer pursuant to law, and all orders, rules and regulations of the New York Board of Fire Underwriters, or the Insurance Services Office, or any similar body which shall impose any violation, order or duty upon Owner or Tenant with respect to the demised premises, whether or not arising out of Tenant's use or manner of use thereof, or, with respect to the building, if arising out of Tenant's use or manner of use of the demised premises or the building (including the use permitted under th

* finished product and as office space.

GMEI-00005

lease). Except as provided in Article 30 hereof, nothing herein shall require Tenant to make structural repairs or alterations unless Tenant has, by its manner of use of the demised premises or method of operation therein, violated any such laws, ordinances, orders, rules, regulations or requirements with respect thereto. Tenant shall not do or permit any act or thing to be done in or to the demised premises which is contrary to law, or which will invalidate or be in conflict with public liability, fire or other policies of insurance at any time carried by or for the benefit of Owner. Tenant shall not keep anything in the demised premises except as now or hereafter permitted by the Fire Department, Board of Fire Underwriters, Fire Insurance Rating Organization and other authority having jurisdiction, and then only in such manner and such quantity so as not to increase the rate for fire insurance applicable to the building, nor use the premises in a manner which will increase the insurance rate for the building or any property located therein over that in effect prior to the commencement of Tenant's occupancy. If by reason of failure to comply with the foregoing the fire insurance rate shall, at the beginning of this lease or at any time thereafter, be higher than it otherwise would be, then Tenant shall reimburse Owner, as additional rent hereunder, for that portion of all fire insurance premiums thereafter paid by Owner which shall have been charged because of such failure by Tenant. In any action or proceeding wherein Owner and Tenant are parties, a schedule or "make-up" or rate for the building or demised premises issued by a body making fire insurance rates applicable to said premises shall be conclusive evidence of the facts therein stated and of the several items and charges in the fire insurance rates then applicable to said premises. Tenant shall not place a load upon any floor of the demised premises exceeding the floor load per square foot area which it was designed to carry and which is allowed by law. Owner reserves the right to prescribe the weight and position of all safes, business machines and mechanical equipment. Such installations shall be placed and maintained by Tenant, at Tenant's expense, in settings sufficient, in Owner's judgement, to absorb and prevent vibration, noise and annoyance.

**Subordination:** 7. This lease is subject and subordinate to all ground or underlying leases and to all mortgages which may now or hereafter affect such leases or the real property of which demised premises are a part and to all renewals, modifications, consolidations, replacements and extensions of any such underlying leases and mortgages. This clause shall be self-operative and no further instrument or subordination shall be required by any ground or underlying lessor or by any mortgagee, affecting any lease or the real property of which the demised premises are a part. In confirmation of such subordination, Tenant shall execute promptly any certificate that Owner may request.

**Property—Loss, Damage, Reimbursement, Indemnity:** 8. Owner or its agents shall not be liable for any damage to property of Tenant or of others entrusted to employees of the building, nor for loss of or damage to any property of Tenant by theft or otherwise, nor for any injury or damage to persons or property resulting from any cause of whatsoever nature, unless caused by or due to the negligence of Owner, its agents, servants or employees; Owner or its agents shall not be liable for any damage caused by other tenants or persons in, upon or about said building or caused by operations in connection of any private, public or quasi public work. If at any time any windows of the demised premises are temporarily closed, darkened or bricked up (or permanently closed, darkened or bricked up, if required by law) for any reason whatsoever including, but not limited to Owner's own acts, Owner shall not be liable for any damage Tenant may sustain thereby and Tenant shall not be entitled to any compensation therefor nor abatement or diminution of rent nor shall the same release Tenant from its obligations hereunder nor constitute an eviction. Tenant shall indemnify and save harmless Owner against and from all liabilities, obligations, damages, penalties, claims, costs and expenses for which Owner shall not be reimbursed by insurance, including reasonable attorney's fees, paid, suffered or incurred as a result of any breach by Tenant, Tenant's agents, contractors, employees, invitees, or licensees, of any covenant or condition of this lease, or the carelessness, negligence or improper conduct of the Tenant, Tenant's agents, contractors, employees, invitees or licensees. Tenant's liability under this lease extends to the acts and omissions of any sub-tenant, and any agent, contractor, employee, invitee or licensee of any sub-tenant. In case any action or proceeding is brought against Owner by reason of any such claim, Tenant, upon written notice from Owner, will, at Tenant's expense, resist or defend such action or proceeding by counsel approved by Owner in writing, such approval not to be unreasonably withheld.

**Destruction, Fire and Other Casualty:** 9. (a) If the demised premises or any part thereof shall be damaged by fire or other casualty, Tenant shall give immediate notice thereof to Owner and this lease shall continue in full force and effect except as hereinafter set forth. (b) If the demised premises are partially damaged or rendered partially unusable by fire or other casualty, the damages thereto shall be repaired by and at the expense of Owner and the rent, until such repair shall be substantially completed, shall be apportioned from the day following the casualty according to the part of the premises which is usable. (c) If the demised premises are totally damaged or rendered wholly unusable by fire or other casualty, then the rent shall be proportionately paid up to the time of the casualty and thenceforth shall cease until the date when the premises shall have been repaired and restored by Owner, subject to Owner's right to elect not to restore the same as hereinafter provided. (d) If the demised premises are rendered wholly unusable or (whether or not the demised premises are damaged in whole or in part) if the building shall be so damaged that Owner shall decide to demolish it or to rebuild it, then, in any of such events, Owner may elect to terminate this lease by written notice to Tenant, given within 90 days after such fire or casualty, specifying a date for the expiration of the lease, which date shall not be more than 60 days after the giving of such notice, and upon the date specified in such notice the term of this lease shall expire as fully and completely as if such date were the date set forth above for the termination of this lease and Tenant shall forthwith quit, surrender and vacate the premises without prejudice however, to Owner's rights and remedies against Tenant under the lease provisions in effect prior to such termination, and any rent owing shall be paid up to such date and any payments of rent made by Tenant which were on account of any period subsequent to such date shall be returned to Tenant. Unless Owner shall serve a termination notice as provided for herein, Owner shall make the repairs and restorations under the conditions of (b) and (c) hereof, with all reasonable expedition, subject to delays due to adjustment of insurance claims, labor troubles and causes beyond Owner's control. After any such casualty, Tenant shall cooperate with Owner's restoration by removing from the premises as promptly as reasonably possible, all of Tenant's salvageable inventory and movable equipment, furniture, and other property. Tenant's liability for rent shall resume five (5) days after written notice from Owner that the premises are substantially ready for Tenant's occupancy. (e) Nothing contained hereinabove shall relieve Tenant from liability that may exist as a result of damage from fire or other casualty. Notwithstanding the foregoing, each party shall look first to any insurance in its favor before making any claim against the other party for recovery for loss or damage resulting from fire or other casualty, and to the extent that such insurance is in force and collectible and to the extent permitted by law, Owner and Tenant each hereby releases and waives all right of recovery against the other or any one claiming through or under each of them by way of subrogation or otherwise. The foregoing release and waiver shall be in force only if both releasors' insurance policies contain a clause providing that such a release or waiver shall not invalidate the insurance. If, and to the extent, that such waiver can be obtained only by the payment of additional premiums, then the party benefitting from the waiver shall pay such premium within ten days after written demand or shall be deemed to have agreed that the party obtaining insurance coverage shall be free of any further obligation under the provisions hereof with respect to waiver of subrogation. Tenant acknowledges that Owner will not carry insurance on Tenant's furniture and or furnishings or any fixtures or equipment, improvements, or appurtenances removable by Tenant and agrees that Owner will not be obligated to repair any damage thereto or replace the same. (f) Tenant hereby waives the provisions of Section 227 of the Real Property Law and agrees that the provisions of this article shall govern and control in lieu thereof.

**Eminent Domain:** 10. If the whole or any part of the demised premises shall be acquired or condemned by Eminent Domain for any public or quasi public use or purpose, then and in that event, the term of this lease shall cease and terminate from the date of title vesting in such proceeding and Tenant shall have no claim for the value of any unexpired term of said lease.

**Assignment, Mortgage, Etc.:** 11. Tenant, for itself, its heirs, distributees, executors, administrators, legal representatives, successors and assigns, expressly covenants that it shall not assign, mortgage or encumber this agreement, nor underlet, or suffer or permit the demised premises or any part thereof to be used by others, without the prior written consent of Owner in each instance. Transfer of the majority of the stock of a corporate Tenant shall be deemed an assignment. If this lease be assigned, or if the demised premises or any part thereof be underlet or occupied by anybody other than Tenant, Owner may, after default by Tenant, collect rent from the assignee, under-tenant or occupant, and apply the net amount collected to the rent herein reserved, but no such assignment, underletting, occupancy or collection shall be deemed a waiver of this covenant, or the acceptance of the assignee, under-tenant or occupant as tenant, or a release of Tenant from the further performance by Tenant of covenants on the part of Tenant herein contained. The consent by Owner to an assignment or underletting shall not in any wise be construed to relieve Tenant from obtaining the express consent in writing of Owner to any further assignment or underletting.

**Electric Current:** ☞ 12. Rates and conditions in respect to submetering or rent inclusion, as the case may be, to be added in RIDER attached hereto. Tenant covenants and agrees that at all times its use of electric current shall not exceed the capacity of existing feeders to the building or the risers or wiring installation and Tenant may not use any electrical equipment which, in Owner's opinion, reasonably exercised, will overload such installations or interfere with the use thereof by other tenants of the building. The change at any time of the character of electric service shall in no wise make Owner liable or responsible to Tenant, for any loss, damages or expenses which Tenant may sustain.

**Access to Premises:** 13. Owner or Owner's agents shall have the right (but shall not be obligated) to enter the demised premises in any emergency at any time, and, at other reasonable times, to examine the same and to make such repairs, replacements and improvements as Owner may deem necessary and reasonably desirable to any portion of the building or which Owner may elect to perform in the premises after Tenant's failure to make repairs or perform any work which Tenant is obligated to perform under this lease, or for the purpose of complying with laws, regulations and other directions of governmental authorities. Tenant shall permit Owner to use and maintain and replace pipes and conduits in and through the demised premises and to erect new pipes and conduits therein provided, wherever possible, they are within walls or otherwise concealed. Owner may, during the progress of any work in the demised premises, take all necessary materials and equipment into said premises without the same constituting an eviction nor shall the Tenant be entitled to any abatement of rent while such work is in progress nor to any damages by reason of loss or interruption of business or otherwise. Throughout the term hereof Owner shall have the right to enter the demised premises at reasonable hours for the purpose of showing the same to prospective purchasers or mortgagees of the building, and during the last six months of the term for the purpose of showing the same to prospective tenants and may, during said six months period, place upon the premises the usual notices "To Let" and "For Sale" which notices Tenant shall permit to remain thereon without molestation. If Tenant is not present to open and permit an entry into the premises, Owner or Owner's agents may enter the same whenever such entry may be necessary or permissible by master key or forcibly and provided reasonable care is exercised to safeguard Tenant's property, such entry shall not render Owner or its agents liable therefor, nor in any event shall the obligation of Tenant hereunder be affected. If during the last month of the term Tenant shall have removed all or substantially all of Tenant's property therefrom, Owner may immediately enter, alter, renovate or redecorate the demised premises without limitation or abatement of rent, or incur ing liability to Tenant for any compensation and such act shall have no effect on this lease or Tenant's obligations hereunder.

☞ Rider to be added if necessary.

*[initials]*

**Vaults, Vault Space, Area:** 14. No Vaults, vault space or area, whether or not enclosed or covered, not within the property line of the building is leased hereunder, anything contained in or indicated on any sketch, blue print or plan, or anything contained elsewhere in this lease to the contrary notwithstanding. Owner makes no representation as to the location of the property line of the building. All vaults and vault space and all such areas not within the property line of the building, which Tenant may be permitted to use and/or occupy, is to be used and/or occupied under a revocable license, and if any such license be revoked, or if the amount of such space or area be diminished or required by any federal, state or municipal authority or public utility, Owner shall not be subject to any liability nor shall Tenant be entitled to any compensation or diminution or abatement of rent, nor shall such revocation, diminution or requisition be deemed constructive or actual eviction. Any tax, fee or charge of municipal authorities for such vault or area shall be paid by Tenant, if used by Tenant, whether or not specifically leased hereunder.

**Occupancy:** 15. Tenant will not at any time use or occupy the demised premises in violation of the certificate of occupancy issued for the building of which the demised premises are a part. Tenant has inspected the premises and accepts them as is, subject to the riders annexed hereto with respect to Owner's work, if any. In any event, Owner makes no representation as to the condition of the premises and Tenant agrees to accept the same subject to violations, whether or not of record. If any governmental license or permit shall be required for the proper and lawful conduct of Tenant's business, Tenant shall be responsible for and shall procure and maintain such license or permit.

**Bankruptcy:** 16. (a) Anything elsewhere in this lease to the contrary notwithstanding, this lease may be cancelled by Owner by sending of a written notice to Tenant within a reasonable time after the happening of any one or more of the following events: (1) the commencement of a case in bankruptcy or under the laws of any state naming Tenant as the debtor; or (2) the making by Tenant of an assignment or any other arrangement for the benefit of creditors under any state statute. Neither Tenant nor any person claiming through or under Tenant, or by reason of any statute or order of court, shall thereafter be entitled to possession of the premises demised but shall forthwith quit and surrender the premises. If this lease shall be assigned in accordance with its terms, the provisions of this Article 16 shall be applicable only to the party then owning Tenant's interest in this lease.

(b) It is stipulated and agreed that in the event of the termination of this lease pursuant to (a) hereof, Owner shall forthwith, notwithstanding any other provisions of this lease to the contrary, be entitled to recover from Tenant as and for liquidated damages an amount equal to the difference between the rental reserved hereunder for the unexpired portion of the term demised and the fair and reasonable rental value of the demised premises for the same period. In the computation of such damages the difference between any installment of rent becoming due hereunder after the date of termination and the fair and reasonable rental value of the demised premises for the period for which such installment was payable shall be discounted to the date of termination at the rate of four percent (4%) per annum. If such premises or any part thereof be relet by the Owner for the unexpired term of said lease, or any part thereof, before presentation of proof of such liquidated damages to any court, commission or tribunal, the amount of rent reserved upon such reletting shall be deemed to be the fair and reasonable rental value for the part or the whole of the premises so re-let during the term of the re-letting. Nothing herein contained shall limit or prejudice the right of the Owner to prove for and obtain as liquidated damages by reason of such termination, an amount equal to the maximum allowed by any statute or rule of law in effect at the time when, and governing the proceedings in which, such damages are to be proved, whether or not such amount be greater, equal to, or less than the amount of the difference referred to above.

**Default:** 17. (1) If Tenant defaults in fulfilling any of the covenants of this lease other than the covenants for the payment of rent or additional rent; or if the demised premises becomes vacant or deserted "or if this lease be rejected under § 235 of Title 11 of the U.S. Code (bankruptcy code);" or if any execution or attachment shall be issued against Tenant or any of Tenant's property whereupon the demised premises shall be taken or occupied by someone other than Tenant; or if Tenant shall make default with respect to any other lease between Owner and Tenant; or if Tenant shall have failed, after five (5) days written notice, to redeposit with Owner any portion of the security deposited hereunder which Owner has applied to the payment of any rent and additional rent due and payable hereunder or failed to move into or take possession of the premises within fifteen (15) days after the commencement of the term of this lease, of which fact Owner shall be the sole judge; then in any one or more of such events, upon Owner serving a written five (5) days notice upon Tenant specifying the nature of said default and upon the expiration of said five (5) days, if Tenant shall have failed to comply with or remedy such default, or if the said default or omission complained of shall be of a nature that the same cannot be completely cured or remedied within said five (5) day period, and if Tenant shall not have diligently commenced during such default within such five (5) day period, and shall not thereafter with reasonable diligence and in good faith, proceed to remedy or cure such default, then Owner may serve a written three (3) days' notice of cancellation of this lease upon Tenant, and upon the expiration of said three (3) days this lease and the term thereunder shall end and expire as fully and completely as if the expiration of such three (3) day period were the day herein definitely fixed for the end and expiration of this lease and the term thereof and Tenant shall then quit and surrender the demised premises to Owner but Tenant shall remain liable as hereinafter provided.

(2) If the notice provided for in (1) hereof shall have been given, and the term shall expire as aforesaid: or if Tenant shall make default in the payment of the rent reserved herein or any item of additional rent herein mentioned or any part of either or in making any other payment herein required; then and in any of such events Owner may without notice, re-enter the demised premises either by force or otherwise, and dispossess Tenant by summary proceedings or otherwise, and the legal representative of Tenant or other occupant of demised premises and remove their effects and hold the premises as if this ... been made, and Tenant hereby waives the service of notice of intention to re-enter or to institute legal proceedings to that end. If Tenant shall make default hereunder prior to the date fixed as the commencement of any renewal or extension of this lease, Owner may cancel and terminate such renewal or extension agreement by written notice.

**Remedies of Owner and Waiver of Redemption:** 18. In case of any such default, re-entry, expiration and/or dispossess by summary proceedings or otherwise, (a) the rent, and additional rent, shall become due thereupon and be paid up to the time of such re-entry, dispossess and/or expiration, (b) Owner may re-let the premises or any part or parts thereof, either in the name of Owner or otherwise, for a term or terms, which may at Owner's option be less than or exceed the period which would otherwise have constituted the balance of the term of this lease and may grant concessions or free rent or charge a higher rental than that in this lease, (c) Tenant or the legal representatives of Tenant shall also pay Owner as liquidated damages for the failure of Tenant to observe and perform said Tenant's convenants herein contained, any deficiency between the rent hereby reserved and or covenanted to be paid and the net amount, if any, of the rents collected on account of the subsequent lease or leases of the demised premises for each month of the period which would otherwise have constituted the balance of the term of this lease. The failure of Owner to re-let the premises or any part or parts thereof shall not release or affect Tenant's liability for damages. In computing such liquidated damages there shall be added to the said deficiency such expenses as Owner may incur in connection with re-letting, such as legal expenses, attorneys' fees, brokerage, advertising and for keeping the demised premises in good order or for preparing the same for re-letting. Any such liquidated damages shall be paid in monthly installments by Tenant on the rent day specified in this lease and any suit brought to collect the amount of the deficiency for any month shall not prejudice in any way the rights of Owner to collect the deficiency for any subsequent month by a similar proceeding. Owner, in putting the demised premises in good order or preparing the same for re-rental may, at Owner's option, make such alterations, repairs, replacements, and/or decorations in the demised premises as Owner, in Owner's sole judgment, considers advisable and necessary for the purpose of re-letting the demised premises, and the making of such alterations, repairs, replacements, and/or decorations shall not operate or be construed to release Tenant from liability hereunder as aforesaid. Owner shall in no event be liable in any way whatsoever for failure to re-let the demised premises, or in the event that the demised premises are re-let, for failure to collect the rent thereof under such re-letting, and in no event shall Tenant be entitled to receive any excess, if any, of such net rents collected over the sums payable by Tenant to Owner hereunder. In the event of a breach or threatened breach by Tenant of any of the covenants or provisions hereof, Owner shall have the right of injunction and the right to invoke any remedy allowed at law or in equity as if re-entry, summary proceedings and other remedies were not herein provided for. Mention in this lease of any particular remedy, shall not preclude Owner from any other remedy, in law or in equity. Tenant hereby expressly waives any and all rights of redemption granted by or under any present or future laws.

**Fees and Expenses:** 19. If Tenant shall default in the observance or performance of any term or covenant on Tenant's part to be observed or performed under or by virtue of any of the terms or provisions in any article of this lease, then, unless otherwise provided elsewhere in this lease, Owner may immediately or at any time thereafter and without notice perform the obligation of Tenant thereunder. If Owner, in connection with the foregoing or in connection with any default by Tenant in the covenant to pay rent hereunder, makes any expenditures or incurs any obligations for the payment of money, including but not limited to attorney's fees, in instituting, prosecuting or defending any action or proceedings, then Tenant will reimburse Owner for such sums so paid or obligations incurred with interest and costs. The foregoing expenses incurred by reason of Tenant's default shall be deemed to be additional rent hereunder and shall be paid by Tenant to Owner within five (5) days of rendition of any bill or statement to Tenant therefor. If Tenant's lease term shall have expired at the time of making of such expenditures or incurring of such obligations, such sums shall be recoverable by Owner as damages.

**Building Alterations and Management:** 20. Owner shall have the right at any time without the same constituting an eviction and without incurring liability to Tenant therefor to change the arrangement and or location of public entrances, passageways, doors, doorways, corridors, elevators, stairs, toilets or other public parts of the building and to change the name, number or designation by which the building may be known. There shall be no allowance to Tenant for diminution of rental value and no liability on the part of Owner by reason of inconvenience, annoyance or injury to business arising from Owner or other Tenant making any repairs in the building or any such alterations, additions and improvements. Furthermore, Tenant shall not have any claim against Owner by reason of Owner's imposition of any controls of the manner of access to the building by Tenant's social or business visitors as the Owner may deem necessary for the security of the building and its occupants.

**No Representations by Owner:** 21. Neither Owner nor Owner's agents have made any representations or promises with respect to the physical condition of the building, the land upon which it is erected or the demised premises, the rents, leases, expenses of operation or any other matter or thing affecting or related to the demised premises or the building except as herein expressly set forth and no rights, easements or licenses are acquired by Tenant by implication or otherwise except as expressly set forth in the provisions of this lease. Tenant has inspected the building and the demised premises and is thoroughly acquainted with their condition and agrees to take the same "as is" on the date possession is tendered and acknowledges that the taking of possession of the demised premises by Tenant shall be conclusive evidence that the said premises and the building of which the same form a part were in good and satisfactory condition at the time such possession was so taken, except as to latent defects. All understandings and agreements heretofore made between the parties hereto are merged in this contract, which alone fully and completely expresses the agreement between Owner and Tenant and any executory agreement hereafter made shall be ineffective to uch executory agreement is in writing and signed by the party enforcement of the change, modification, discharge or …t is sought.

**…of …erm:** 22. Upon the expiration or other termination of the term of this lease, Tenant shall quit and surrender to Owner the demised premises, broom clean, in good order and condition, ordinary wear and damages which Tenant is not required to repair as provided elsewhere in this lease excepted, and Tenant shall remove all its property from the demised premises. Tenant's obligation to observe or perform this covenant shall survive the expiration or other termination of this lease. If the last day of the term of this Lease or any renewal thereof, falls on Sunday, this lease shall expire at noon on the preceding Saturday unless it be a legal holiday in which case it shall expire at noon on the preceding business day.

**Quiet Enjoyment:** 23. Owner covenants and agrees with Tenant that upon Tenant paying the rent and additional rent and observing and performing all the terms, covenants and conditions, on Tenant's part to be observed and performed, Tenant may peaceably and quietly enjoy the premises hereby demised, subject, nevertheless, to the terms and conditions of this lease including, but not limited to, Article 34 hereof and to the ground leases, underlying leases and mortgages hereinbefore mentioned.

**Failure to Give Possession:** 24. If Owner is unable to give possession of the demised premises on the date of the commencement of the term hereof, because of the holding-over or retention of possession of any tenant, undertenant or occupants or if the demised premises are located in a building being constructed, because such building has not been sufficiently completed to make the premises ready for occupancy or because of the fact that a certificate of occupancy has not been procured or if Owner has not completed any work required to be performed by Owner, or for any other reason, Owner shall not be subject to any liability for failure to give possession on said date and the validity of the lease shall not be impaired under such circumstances, nor shall the same be construed in any wise to extend the term of this lease, but the rent payable hereunder shall be abated (provided Tenant is not responsible for Owner's inability to obtain possession or complete any work required) until after Owner shall have given Tenant notice that the premises are substantially ready for Tenant's occupancy. If permission is given to Tenant to enter into the possession of the demised premises or to occupy premises other than the demised premises prior to the date specified as the commencement of the term of this lease, Tenant covenants and agrees that such occupancy shall be deemed to be under all the terms, covenants, conditions and provisions of this lease, except as to the covenant to pay rent. The provisions of this article are intended to constitute "an express provision to the contrary" within the meaning of Section 223-a of the New York Real Property Law.

**No Waiver:** 25. The failure of Owner to seek redress for violation of, or to insist upon the strict performance of any covenant or condition of this lease or of any of the Rules or Regulations, set forth or hereafter adopted by Owner, shall not prevent a subsequent act which would have originally constituted a violation from having all the force and effect of an original violation. The receipt by Owner of rent with knowledge of the breach of any covenant of this lease shall not be deemed a waiver of such breach and no provision of this lease shall be deemed to have been waived by Owner unless such waiver be in writing signed by Owner. No payment by Tenant or receipt by Owner of a lesser amount than the monthly rent herein stipulated shall be deemed to be other than on account of the earliest stipulated rent, nor shall any endorsement or statement of any check or any letter accompanying any check or payment as rent be deemed an accord and satisfaction, and Owner may accept such check or payment without prejudice to Owner's right to recover the balance of such rent or pursue any other remedy in this lease provided. All checks tendered to Owner as and for the rent of the demised premises shall be deemed payments for the account of Tenant. Acceptance by Owner of rent from anyone other than Tenant shall not be deemed to operate as an attornment to Owner by the payor of such rent or as a consent by Owner to an assignment or subletting by Tenant of the demised premises to such payor, or as a modification of the provisions of this lease. No act or thing done by Owner or Owner's agents during the term hereby demised shall be deemed an acceptance of a surrender of said premises and no agreement to accept such surrender shall be valid unless in writing signed by Owner. No employee of Owner or Owner's agent shall have any power to accept the keys of said premises prior to the termination of the lease and the delivery of keys to any such agent or employee shall not operate as a termination of the lease or a surrender of the premises.

**Waiver of Trial by Jury:** 26. It is mutually agreed by and between Owner and Tenant that the respective parties hereto shall and they hereby do waive trial by jury in any action, proceeding or counterclaim brought by either of the parties hereto against the other (except for personal injury or property damage) on any matters whatsoever arising out of or in any way connected with this lease, the relationship of Owner and Tenant, Tenant's use of or occupancy of said premises, and any emergency statutory or any other statutory remedy. It is further mutually agreed that in the event Owner commences any summary proceeding for possession of the premises, Tenant will not interpose any counterclaim of whatever nature or description in any such proceeding.

**Inability to Perform:** 27. This Lease and the obligation of Tenant to pay rent hereunder and perform all of the other covenants and agreements hereunder on part of Tenant to be performed shall in no wise be affected, impaired or excused because Owner is unable to fulfill any of its obligations under this lease or to supply or is delayed in supplying any service expressly or impliedly to be supplied or is unable to make, or is delayed in making any repair, additions, alterations or decorations or is unable to supply or is delayed in supplying any equipment or fixtures if Owner is prevented or delayed from so doing by reason of strike or labor troubles or any cause whatsoever beyond Owner's sole control including, but not limited to, government preemption in connection with a National Emergency or by reason of any rule, order or regulation of any department or subdivision thereof of any government agency or by reason of the conditions of supply and demand which have been or are affected by war or other emergency.

☞ Space to be filled in or deleted.

**Bills and Notices:** 28. Except as otherwise in this lease provided, a bill, statement, notice or communication which Owner may desire or be required to give to Tenant, shall be deemed sufficiently given or rendered if, in writing, delivered to Tenant personally or sent by registered or certified mail addressed to Tenant at the building of which the demised premises form a part or at the last known residence address or business address of Tenant or left at any of the aforesaid premises addressed to Tenant, and the time of the rendition of such bill or statement and of the giving of such notice or communication shall be deemed to be the time when the same is delivered to Tenant, mailed, or left at the premises as herein provided. Any notice by Tenant to Owner must be served by registered or certified mail addressed to Owner at the address first hereinabove given or at such other address as Owner shall designate by written notice.

**Water Charges:** 29. If Tenant requires, uses or consumes water for any purpose in addition to ordinary lavatory purposes (of which fact Tenant constitutes Owner to be the sole judge) Owner may install a water meter and thereby measure Tenant's water consumption for all purposes. Tenant shall pay Owner for the cost of the meter and the cost of the installation, thereof and throughout the duration of Tenant's occupancy Tenant shall keep said meter and installation equipment in good working order and repair at Tenant's own cost and expense in default of which Owner may cause such meter and equipment to be replaced or repaired and collect the cost thereof from Tenant, as additional rent. Tenant agrees to pay for water consumed, as shown on said meter as and when bills are rendered, and on default in making such payment Owner may pay such charges and collect the same from Tenant, as additional rent. Tenant covenants and agrees to pay, as additional rent, the sewer rent, charge or any other tax, rent, levy or charge which now or hereafter is assessed, imposed or a lien upon the demised premises or the realty of which they are part pursuant to law, order or regulation made or issued in connection with the use, consumption, maintenance or supply of water, water system or sewage or sewage connection or system. If the building or the demised premises or any part thereof is supplied with water through a meter through which water is also supplied to other premises Tenant shall pay to Owner, as additional rent, on the first day of each month, % ($ ) of the total meter ☞ charges as Tenant's portion. Independently of and in addition to any of the remedies reserved to Owner hereinabove or elsewhere in this lease, Owner may sue for and collect any monies to be paid by Tenant or paid by Owner for any of the reasons or purposes hereinabove set forth.

**Sprinklers:** 30. Anything elsewhere in this lease to the contrary nowithstanding, if the New York Board of Fire Underwriters or the New York Fire Insurance Exchange or any bureau, department or official of the federal, state or city government recommend or require the installation of a sprinkler system or that any changes, modifications, alterations, or additional sprinkler heads or other equipment be made or supplied in an existing sprinkler system by reason of Tenant's business, or the location of partitions, trade fixtures, or other contents of the demised premises, or for any other reason, or if any such sprinkler system installations, modifications, alterations, additional sprinkler heads or other such equipment, become necessary to prevent the imposition of a penalty or charge against the full allowance for a sprinkler system in the fire insurance rate set by any said Exchange or by any fire insurance company, Tenant shall, at Tenant's expense, promptly make such sprinkler system installations, changes, modifications, alterations, and supply additional sprinkler heads or other equipment as required whether the work involved shall be structural or non-structural in nature. Tenant shall pay to Owner as additional rent the sum of ☞ $______________, on the first day of each month during the term of this lease, as Tenant's portion of the contract price for sprinkler supervisory service.

**Elevators, Heat, Cleaning:** 31. As long as Tenant is not in default under any of the convenants of this lease Owner shall: (a) provide necessary passenger elevator facilities on business days from 8 a.m. to 6 p.m. and on Saturdays from 8 a.m. to 1 p.m.; (b) if freight elevator service is provided, same shall be provided only on regular business days Monday through Friday inclusive, and on those days only between the hours of 9 a.m. and 12 noon and between 1 p.m. and 5 p.m.; (c) furnish heat, water and other services supplied by Owner to the demised premises, when and as required by law, on business days from 8 a.m. to 6 p.m. and on Saturdays from 8 a.m. to 1 p.m.; (d) clean the public halls and public portions of the building which are used in common by all tenants. Tenant shall, at Tenant's expense, keep the demised premises, including the windows, clean and in order, to the satisfaction of Owner, and for that purpose shall employ the person or persons, or corporation approved by Owner. Tenant shall pay to Owner the cost of removal of any of Tenant's refuse and rubbish from the building. Bills for the same shall be rendered by Owner to Tenant at such time as Owner may elect and shall be due and payable hereunder, and the amount of such bills shall be deemed to be, and be paid as, additional rent. Tenant shall, however, have the option of independently contracting for the remo… of such rubbish and refuse in the event that Tenant does not wish to have same done by employees of Owner. Under such circumstances, however, the removal of such refuse and rubbish by others shall be subject to such rules and regulations as, in the judgment of Owner, are necessary for the proper operation of the building. Owner reserves the right to stop service of the heating, elevator, plumbing and electric systems, when necessary, by reason of accident, or emergency, or for repairs, alterations, replacements or improvements, in the judgment of Owner desirable or necessary to be made, until said repairs, alterations, replacements or improvements shall have been completed. If the building of which the demised premises are a part supplies manually operated elevator service, Owner may proceed with alterations necessary to substitute automatic control elevator service upon ten (10) day written notice to Tenant without in any way affecting the obligations of Tenant hereunder, provided that the same shall be done with the minimum amount of inconvenience to Tenant, and Owner pursues with due diligence the completion of the alterations.

uch executory agreement is in writing and signed by the party … enforcement of the change, modification, discharge or … is sought.

**… of … erm:** 22. Upon the expiration or other termination of the term of this lease, Tenant shall quit and surrender to Owner the demised premises, broom clean, in good order and condition, ordinary wear and damages which Tenant is not required to repair as provided elsewhere in this lease excepted, and Tenant shall remove all its property from the demised premises. Tenant's obligation to observe or perform this covenant shall survive the expiration or other termination of this lease. If the last day of the term of this Lease or any renewal thereof, falls on Sunday, this lease shall expire at noon on the preceding Saturday unless it be a legal holiday in which case it shall expire at noon on the preceding business day.

**Quiet Enjoyment:** 23. Owner covenants and agrees with Tenant that upon Tenant paying the rent and additional rent and observing and performing all the terms, covenants and conditions, on Tenant's part to be observed and performed, Tenant may peaceably and quietly enjoy the premises hereby demised, subject, nevertheless, to the terms and conditions of this lease including, but not limited to, Article 34 hereof and to the ground leases, underlying leases and mortgages hereinbefore mentioned.

**Failure to Give Possession:** 24. If Owner is unable to give possession of the demised premises on the date of the commencement of the term hereof, because of the holding-over or retention of possession of any tenant, undertenant or occupants or if the demised premises are located in a building being constructed, because such building has not been sufficiently completed to make the premises ready for occupancy or because of the fact that a certificate of occupancy has not been procured or if Owner has not completed any work required to be performed by Owner, or for any other reason, Owner shall not be subject to any liability for failure to give possession on said date and the validity of the lease shall not be impaired under such circumstances, nor shall the same be construed in any wise to extend the term of this lease, but the rent payable hereunder shall be abated (provided Tenant is not responsible for Owner's inability to obtain possession or complete any work required) until after Owner shall have given Tenant notice that the premises are substantially ready for Tenant's occupancy. If permission is given to Tenant to enter into the possession of the demised premises or to occupy premises other than the demised premises prior to the date specified as the commencement of the term of this lease. Tenant covenants and agrees that such occupancy shall be deemed to be under all the terms, covenants, conditions and provisions of this lease, except as to the covenant to pay rent. The provisions of this article are intended to constitute "an express provision to the contrary" within the meaning of Section 223-a of the New York Real Property Law.

**No Waiver:** 25. The failure of Owner to seek redress for violation of, or to insist upon the strict performance of any covenant or condition of this lease or of any of the Rules or Regulations, set forth or hereafter adopted by Owner, shall not prevent a subsequent act which would have originally constituted a violation from having all the force and effect of an original violation. The receipt by Owner of rent with knowledge of the breach of any covenant of this lease shall not be deemed a waiver of such breach and no provision of this lease shall be deemed to have been waived by Owner unless such waiver be in writing signed by Owner. No payment by Tenant or receipt by Owner of a lesser amount than the monthly rent herein stipulated shall be deemed to be other than on account of the earliest stipulated rent, nor shall any endorsement or statement of any check or any letter accompanying any check or payment as rent be deemed an accord and satisfaction, and Owner may accept such check or payment without prejudice to Owner's right to recover the balance of such rent or pursue any other remedy in this lease provided. All checks tendered to Owner as and for the rent of the demised premises shall be deemed payments for the account of Tenant. Acceptance by Owner of rent from anyone other than Tenant shall not be deemed to operate as an attornment to Owner by the payor of such rent or as a consent by Owner to an assignment or subletting by Tenant of the demised premises to such payor, or as a modification of the provisions of this lease. No act or thing done by Owner or Owner's agents during the term hereby demised shall be deemed an acceptance of a surrender of said premises and no agreement to accept such surrender shall be valid unless in writing signed by Owner. No employee of Owner or Owner's agent shall have any power to accept the keys of said premises prior to the termination of the lease and the delivery of keys to any such agent or employee shall not operate as a termination of the lease or a surrender of the premises.

**Waiver of Trial by Jury:** 26. It is mutually agreed by and between Owner and Tenant that the respective parties hereto shall and they hereby do waive trial by jury in any action, proceeding or counterclaim brought by either of the parties hereto against the other (except for personal injury or property damage) on any matters whatsoever arising out of or in any way connected with this lease, the relationship of Owner and Tenant, Tenant's use of or occupancy of said premises, and any emergency statutory or any other statutory remedy. It is further mutually agreed that in the event Owner commences any summary proceeding for possession of the premises, Tenant will not interpose any counterclaim of whatever nature or description in any such proceeding.

**Inability to Perform:** 27. This Lease and the obligation of Tenant to pay rent hereunder and perform all of the other covenants and agreements hereunder on part of Tenant to be performed shall in no wise be affected, impaired or excused because Owner is unable to fulfill any of its obligations under this lease or to supply or is delayed in supplying any service expressly or impliedly to be supplied or is unable to make, or is delayed in making any repair, additions, alterations or decorations or is unable to supply or is delayed in supplying any equipment or fixtures if Owner is prevented or delayed from so doing by reason of strike or labor troubles or any cause whatsoever beyond Owner's sole control including, but not limited to, government preemption in connection with a National Emergency or by reason of any rule, order or regula… are affected by war or other emergency.

Space to be filled in or deleted.

**Bills and Notices:** 28. Except as otherwise in this lease provided, a bill, statement, notice or communication which Owner may desire or be required to give to Tenant, shall be deemed sufficiently given or rendered it, in writing, delivered to Tenant personally or sent by registered or certified mail addressed to Tenant at the building of which the demised premises form a part or at the last known residence address or business address of Tenant or left at any of the aforesaid premises addressed to Tenant, and the time of the rendition of such bill or statement and of the giving of such notice or communication shall be deemed to be the time when the same is delivered to Tenant, mailed, or left at the premises as herein provided. Any notice by Tenant to Owner must be served by registered or certified mail addressed to Owner at the address first hereinabove given or at such other address as Owner shall designate by written notice.

**Water Charges:** 29. If Tenant requires, uses or consumes water for any purpose in addition to ordinary lavatory purposes (of which fact Tenant constitutes Owner to be the sole judge) Owner may install a water meter and thereby measure Tenant's water consumption for all purposes. Tenant shall pay Owner for the cost of the meter and the cost of the installation, thereof and throughout the duration of Tenant's occupancy Tenant shall keep said meter and installation equipment in good working order and repair at Tenant's own cost and expense in default of which Owner may cause such meter and equipment to be replaced or repaired and collect the cost thereof from Tenant, as additional rent. Tenant agrees to pay for water consumed, as shown on said meter as and when bills are rendered, and on default in making such payment Owner may pay such charges and collect the same from Tenant, as additional rent. Tenant covenants and agrees to pay, as additional rent, the sewer rent, charge or any other tax, rent, levy or charge which now or hereafter is assessed, imposed or a lien upon the demised premises or the realty of which they are part pursuant to law, order or regulation made or issued in connection with the use, consumption, maintenance or supply of water, water system or sewage or sewage connection or system. If the building or the demised premises or any part thereof is supplied with water through a meter through which water is also supplied to other premises Tenant shall pay to Owner, as additional rent, on the first day of each month, % ($ ) of the total meter charges as Tenant's portion. Independently of and in addition to any of the remedies reserved to Owner hereinabove or elsewhere in this lease, Owner may sue for and collect any monies to be paid by Tenant or paid by Owner for any of the reasons or purposes hereinabove set forth.

**Sprinklers:** 30. Anything elsewhere in this lease to the contrary nowithstanding, if the New York Board of Fire Underwriters or the New York Fire Insurance Exchange or any bureau, department or official of the federal, state or city government recommend or require the installation of a sprinkler system or that any changes, modifications, alterations, or additional sprinkler heads or other equipment be made or supplied in an existing sprinkler system by reason of Tenant's business, or the location of partitions, trade fixtures, or other contents of the demised premises, or for any other reason, or if any such sprinkler system installations, modifications, alterations, additional sprinkler heads or other such equipment, become necessary to prevent the imposition of a penalty or charge against the full allowance for a sprinkler system in the fire insurance rate set by any said Exchange or by any fire insurance company, Tenant shall, at Tenant's expense, promptly make such sprinkler system installations, changes, modifications, alterations, and supply additional sprinkler heads or other equipment as required whether the work involved shall be structural or non-structural in nature. Tenant shall pay to Owner as additional rent the sum of $__________, on the first day of each month during the term of this lease, as Tenant's portion of the contract price for sprinkler supervisory service.

**Elevators, Heat, Cleaning:** 31. As long as Tenant is not in default under any of the covenants of this lease Owner shall: (a) provide necessary passenger elevator facilities on business days from 8 a.m. to 6 p.m. and on Saturdays from 8 a.m. to 1 p.m.; (b) if freight elevator service is provided, same shall be provided only on regular business days Monday through Friday inclusive, and on those days only between the hours of 9 a.m. and 12 noon and between 1 p.m. and 5 p.m.; (c) furnish heat, water and other services supplied by Owner to the demised premises, when and as required by law, on business days from 8 a.m. to 6 p.m. and on Saturdays from 8 a.m. to 1 p.m.; (d) clean the public halls and public portions of the building which are used in common by all tenants. Tenant shall, at Tenant's expense, keep the demised premises, including the windows, clean and in order, to the satisfaction of Owner, and for that purpose shall employ the person or persons, or corporation approved by Owner. Tenant shall pay to Owner the cost of removal of any of Tenant's refuse and rubbish from the building. Bills for the same shall be rendered by Owner to Tenant at such time as Owner may elect and shall be due and payable hereunder, and the amount of such bills shall be deemed to be, and be paid as, additional rent. Tenant shall, however, have the option of independently contracting for the removal of such rubbish and refuse in the event that Tenant does not wish to have same done by employees of Owner. Under such circumstances, however, the removal of such refuse and rubbish by others shall be subject to such rules and regulations as, in the judgment of Owner, are necessary for the proper operation of the building. Owner reserves the right to stop service of the heating, elevator, plumbing and electric systems, when necessary, by reason of accident, or emergency, or for repairs, alterations, replacements or improvements, in the judgment of Owner desirable or necessary to be made, until said repairs, alterations, replacements or improvements shall have been completed. If the building of which the demised premises are a part supplies manually operated elevator service, Owner may proceed with alterations necessary to substitute automatic control elevator service upon ten (10) day written notice to Tenant without in any way affecting the obligations of Tenant hereunder, provided that the same shall be done with the minimum amount of inconvenience to Tenant, and Owner pursues with due diligence the completion of the alterations.

GMEI-00009

**Security:** 32. Tenant has deposited with Owner the sum of $16,500.00* as security for the faithful performance and observance by Tenant of the terms, provisions and conditions of this lease; it is agreed that in the event Tenant defaults in respect of any of the terms, provisions and conditions of this lease, including, but not limited to, the payment of rent and additional rent, Owner may use, apply or retain the whole or any part of the security so deposited to the extent required for the payment of any rent and additional rent or any other sum as to which tenant is in default or for any sum which Owner may expend or may be required to expend by reason of Tenant's default in respect of any of the terms, covenants and conditions of this lease, including but not limited to, any damages or deficiency in the re-letting of the premises, whether such damages or deficiency accrued before or after summary proceedings or other re-entry by Owner. In the event that Tenant shall fully and faithfully comply with all of the terms, provisions, covenants and conditions of this lease, the security shall be returned to Tenant after the date fixed as the end of the Lease and after delivery of entire possession of the demised premises to Owner. In the event of a sale of the land and building or leasing of the building, of which the demised premises form a part, Owner shall have the right to transfer the security to the vendee or lessee and Owner shall thereupon be released by Tenant from all liability for the return of such security; and Tenant agrees to look to the new Owner solely for the return of said security, and it is agreed that the provisions hereof shall apply to every transfer or assignment made of the security to a new Owner. Tenant further convenants that it will not assign or encumber or attempt to assign or encumber the monies deposited herein as security and that neither Owner nor its successors or assigns shall be bound by any such assignment, encumbrance, attempted assignment or attempted encumbrance.

*representing Approx. three months rent.

**Captions:** 33. The Captions are inserted only as a matter of convenience and for reference and in no way define, limit or describe the scope of this lease nor the intent of any provision thereof.

**Definitions:** 34. The term "Owner" as used in this lease means only the owner of the fee or of the leasehold of the building, or the mortgagee in possession, for the time being of the land and building (or the owner of a lease of the building or of the land and building) of which the demised premises form a part, so that in the event of any sale or sales of said land and building or of said lease, or in the event of a lease of said building, or of the land and building, the said Owner shall be and hereby is entirely freed and relieved of all covenants and obligations of Owner hereunder, and it shall be deemed and construed without further agreement between the parties or their successors in interest, or between the parties and the purchaser, at any such sale, or the said lessee of the building, or of the land and building, that the purchaser or the lessee of the building has assumed and agreed to carry out any and all covenants and obligations of Owner hereunder. The words "re-enter" and "re-entry" as used in this lease are not restricted to their technical legal meaning. The term "rent" includes the annual rental rate whether so-expressed or expressed in monthly installments, and "additional rent." "Additional rent" means all sums which shall be due to new Owner from Tenant under this lease, in addition to the annual rental rate. The term "business days" as used in this lease, shall exclude Saturdays (except such portion thereof as is covered by specific hours in Article 31 hereof), Sundays and all days observed by the State or Federal Government as legal holidays and those designated as holidays by the applicable building service union employees service contract or by the applicable Operating Engineers contract with respect to HVAC service.

**Adjacent Excavation—Shoring:** 35. If an excavation shall be made upon land adjacent to the demised premises, or shall be authorized to be made, Tenant shall afford to the person causing or authorized to cause such excavation, license to enter upon the demised premises for the purpose of doing such work as said person shall deem necessary to preserve the wall or the building of which demised premises form a part from injury or damage and to support the same by proper foundations without any claim for damages or indemnity against Owner, or diminution or abatement of rent.

**Rules and Regulations:** 36. Tenant and Tenant's servants, employees, agents, visitors, and licensees shall observe faithfully, and comply strictly with, the Rules and Regulations annexed hereto and such other and further reasonable Rules and Regulations as Owner or Owner's agents may from time to time adopt. Notice of any additional rules or regulations shall be given in such manner as Owner may elect. In case Tenant disputes the reasonableness of any additional Rule or Regulation hereafter made or adopted by Owner or Owner's agents, the parties hereto agree to submit the question of the reasonableness of such Rule or Regulation for decision to the New York office of the American Arbitration Association, whose determination shall be final and conclusive upon the parties hereto. The right to dispute the reasonableness of any additional Rule or Regulation upon Tenant's part shall be deemed waived unless the same shall be asserted by service of a notice, in writing upon Owner within ten (10) days after the giving of notice thereof. Nothing in this lease contained shall be construed to impose upon Owner any duty or obligation to enforce the Rules and Regulations or terms, covenants or conditions in any other lease, as against any other tenant and Owner shall not be liable to Tenant for violation of the same by any other tenant, its servants, employees, agents, visitors or licensees.

**Glass:** 37. Owner shall replace, at the expense of the Tenant, any and all plate and other glass damaged or broken from any cause whatsoever in and about the demised premises. Owner may insure, and keep insured, at Tenant's expense, all plate and other glass in the demised premises for and in the name of Owner. Bills for the premiums therefor shall be rendered by Owner to Tenant at such times as Owner may elect, and shall be due from, and payable by, Tenant when rendered, and the amount thereof shall be deemed to be, and be paid, as additional rent.

**Estoppel Certificate:** 38. Tenant, at any time, and from time to time, upon at least 10 days' prior notice by Owner, shall execute, acknowledge and deliver to Owner, and/or to any other person, firm or corporation specified by Owner, a statement certifying that this Lease is unmodified in full force and effect (or, if there have been modifications, that the same is in full force and effect as modified and stating the modifications), stating the dates to which the rent and additional rent have been paid, and stating whether or not there exists any default by Owner under this Lease, and, if so, specifying each such default.

**Directory Board Listing:** 39. If, at the request of and as accommodation to Tenant, Owner shall place upon the directory board in the lobby of the building, one or more names of persons other than Tenant, such directory board listing shall not be construed as the consent by Owner to an assignment or subletting by Tenant to such person or persons.

**Successors and Assigns:** 40. The covenants, conditions and agreements contained in this lease shall bind and inure to the benefit of Owner and Tenant and their respective heirs, distributees, executors, administrators, successors, and except as otherwise provided in this lease, their assigns.

☛ Space to be filled in or deleted.

SEE RIDER ANNEXED HERETO AND MADE A PART HEREOF.

**In Witness Whereof,** Owner and Tenant have respectively signed and sealed this lease as of the day and year first above written.

Witness for Owner: ........................................

GRAND MACHINERY EXCHANGE, INC. ........ CORP. SEAL

By: ........................................ [L.S.]

LAWRENCE GOODMAN, Secretary

Landlord

Witness for Tenant: ........................................

TISHCON CORP. ........................................ CORP. SEAL

By: Nitin M. Patel, EX-V.P. ........................................ [L.S.]

~~RAJ K. CHOPRA, President~~

Tenant

TISHCON CORP. • 30 NEW YORK AVENUE • WESTBURY, NY 11590

| INVOICE DATE | INVOICE NUMBER | REFERENCE | GROSS AMOUNT | DISCOUNT | NET AMOUNT |
|---|---|---|---|---|---|
| 12/27/93 | 12.30.93 | SECURITY DEPOSIT EQUIVALENT 3 MONTHS | | | 16,500.00 |
| | | RE: 36 Sylvester Street, Westbury, NY 11590 | | | |
| CHECK NO. 060628 | | TOTALS | | | 16,500.00 |

PLEASE DETACH THIS STUB BEFORE DEPOSITING

TISHCON CORP. • 30 NEW YORK AVENUE • WESTBURY, NY 11590

| INVOICE DATE | INVOICE NUMBER | REFERENCE | GROSS AMOUNT | DISCOUNT | NET AMOUNT |
|---|---|---|---|---|---|
| 12/27/93 | 122793 | RENT FOR MAR.1-31,1994, 36 SYLVESTER ST | | | 5,500.00 |
| | | 36, SYLVESTER STREET, Westbury, NY 11590 | | | |
| CHECK NO. 060629 | | TOTALS | | | 5,500.00 |

PLEASE DETACH THIS STUB BEFORE DEPOSITING

GMEI-00011

RIDER TO LEASE

| | |
|---|---|
| **DATED:** | December 22, 1993 |
| | ** |
| **TERM:** | March 1, 1994 - February 28, 1999 |
| **PREMISES:** | 36 Sylvester Street, Westbury, N.Y. (approximately 12,000 square feet). |
| **LANDLORD:** | Grand Machinery Exchange, Inc.<br>215 Centre Street<br>New York, N.Y. 10013 |
| **TENANT:** | Tishcon Corp.<br>30 New York Ave., P.O. Box 331<br>Westbury, N.Y. 11590 |

**** Approximate commencement date - See Schedule A annesed hereto.**

1. Tenant agrees to exonerate, save harmless, protect, defend and indemnify the Landlord or any owner of the demised premises from any and all losses, damages, claims, suits or actions, judgments and costs, which may arise or grow out of any injury to or death of persons or damage to property in any manner whatsoever arising out of the acts or omissions of, or use by Tenant, Tenant's agents, servants, employees, guests or customers of the demised premises. Excepted from Tenant's liability are events specifically caused by Landlord's negligent acts.

2. (a) Tenant agrees to procure and keep in force during the term of this lease for Tenant's own benefit and for the benefit of Landlord, a comprehensive general public liability insurance policy in standard form protecting Tenant and Landlord against any liability whatsoever occasioned by accident or disaster on or about the demised premises or any appurtenances thereto. Such comprehensive general public liability insurance policy shall be written by a good and solvent company, licensed by the Superintendent of Insurance of the State of New York, with limits of liability of not less than One Million ($1,000,000.00) Dollars bodily injury for one (1) person in one (1) accident or occurrence and/or Two Million ($2,000,000.00) Dollars bodily injury for two (2) or more persons in one (1) accident or occurrence, and property damage insurance in the amount of Five Hundred Thousand ($500,000.00) Dollars. The Landlord, and the holder of any mortgage on the property in which the demised premises form a part,

wf

and Tenant shall be named as insured in such policy. Should additional liability insurance by obtained by Tenant, the same shall include Landlord,and the holder of any mortgage on the property in which the demised premises form a part, as an insured. A copy of said comprehensive general public liability insurance policy shall be delivered to Landlord by Tenant prior to the commencement date of this lease and thereafter at least thirty (30) days prior to the expiration of any such insurance policy.

(b) All premiums on such policies shall be paid by the Tenant when due. In the event, however, that the Tenant should fail to pay any such premium when due and exhibit proof of such payment to the Landlord not less than thirty (30) days prior to the due date, if requested to do so by the Landlord, the Landlord may pay the amount of such premium and the amount so advanced by the landlord with interest thereon at the then legal rate from the date of payment shall be considered additional rent, and shall be due and payable with said interest with the next installment of rent becoming due on the next rent day after such payment.

(c) Tenant shall observe and comply with the requirements of all policies of general public liability insurance and shall not violate or permit to be violated any of the conditions of the said general public liability insurance policy.

3. All policies of insurance provided for in this lease shall contain, if available, a provision that the insurance company at least thirty (30) days prior to cancellation and/or renewals must notify the Landlord accordingly.

4. Except as provided herein, the tenant shall throughout the term of this lease pay all and any utility charges for utilities used at the demised premises, including, but not limited to, electricity, for which Tenant shall have a separate meter, water, and telephone.

5. Tenant shall, at Tenant's own cost and expense and upon Tenant's own responsibility, apply for and obtain any necessary permits and other licenses for the use, conduct and maintenance of the business to be conducted in the demised premises. The Tenant shall also pay all fees in connection with any licenses or permits required by the local municipal authority for any equipment or machinery at the demised premises whether owned by the Landlord or the Tenant.

6. Tenant shall, at all times during the term of this lease, at Tenant's sole cost and expense, promptly comply with all present and future laws, orders and regulations issued or promulgated by the Environmental Protection Administration and of any other governmental or quasi governmental agency, whether of federal, state, city, county, town, village or other municipal level, regulating or otherwise asserting jurisdiction over air or

other ecological environmental pollutants. In the event such compliance "materially" effects Tenant's ability to operate its business at the Premises, Tenant shall have the option of terminating this Lease upon six (6) months notice to Landlord. For purposes of this Paragraph, the word "materially" shall be defined as causing an expenditure of more than $10,000.00.

7. Any notice by either party to the other shall be in writing and shall be deemed to be duly given only if mailed by certified mail, return receipt requested, in a postpaid envelope, addressed: (a) If to Tenant, at the demised premises, with a copy by like memo to Aufrichtig, Stein & Aufrichtig, 300 E. 42nd St., N.Y., N.Y. 10017; (b) If to Landlord, at the address set forth hereinabove, or at any such other address as Landlord may from time to time designate by notice given to Tenant with a copy by like memo to Daniel M. Tanenbaum, Esq., 111 Great Neck Road, Great Neck, NY 11021, or such other attorney, as designated.

8. (a) Except as contained in this Lease, neither Landlord nor Landlord's agents have made any representations or promises with respect to the physical condition of the building, the land upon which it is erected or the demised premises, the rent, leases, expenses of operation or any other matter or thing affecting or related to the demised premises except as herein expressly set forth and no rights, easements or licenses are acquired by Tenant by implication or otherwise except as expressly set forth in the provisions of this lease. Tenant has inspected the building and the demised premises and is thoroughly acquainted with their condition, and agrees to take the same "AS IS"*** and acknowledges that the taking of possession of the demised premises by Tenant shall be conclusive evidence that the demised premises and the building of which the same form a part were in good and satisfactory condition at the time such possession was so taken. All understandings and agreements heretofore made between the parties hereto are merged in this contract, which alone fully and completely expresses the agreement between Landlord and Tenant and any executory agreement hereafter made shall be ineffective to change, modify, discharge or effect an abandonment of it in whole or in part, unless such executory agreement is in writing and signed by the party against whom enforcement of the change, modification, discharge or abandonment is sought.
*** This standard does not apply to the renovations; Tenant shall have the opportunity to inspect and approve of the renovations, i.e. that they were completed in accordance with the work letter annexed hereto and made a part of this lease.

9. Landlord represents that the Tenant's intended use of the Premises, as represented to Landlord by Tenant, does not violate the Certificate of Occupancy nor the applicable rules of The Board of Fire Underwriters.

10. Landlord agrees not to unreasonably withhold Landlord's consent to the assignment or sublease of the within lease upon the following terms and conditions:

(a) That the time of such assignment or sublease Tenant is not in default under any of the terms and conditions required to be performed by Tenant under this lease.

(b) That there is forwarded to Landlord an executed duplicate original of the assignment of lease or sublease in proper form for recording, together with an agreement by the assignee or sublessee assuming all of the terms, covenants and conditions of this lease to be performed by Tenant.

(c) That there is deposited with Landlord an additional one month's security for each and every assignment or sublease of this lease.

(d) That Landlord shall be paid by the assignor or sublessor the sum of One Thousand Five Hundred ($1,500.00) Dollars as a processing fee.

(e) That in no event shall any assignor or sublessor be relieved of any liability under this lease.

(f) That Tenant is specifically permitted to sublet or assign this Lease to an "affiliated" entity of Tenant without having to comply with the requirements of paragraphs (c) and (d) herein. For purposes of this Paragraph, "affiliated" shall be defined as either an entity in which the Tenant owns at least 50% or to relatives of the two largest shareholders of Tenant, i.e. Raj K. Chopra, President and Vipin Patel or to Ashwin Patel or a designee of Ashwin Patel.

11. INTENTIONALLY DELETED

12. INTENTIONALLY DELETED

13. INTENTIOANLLY DELETED

14. The Tenant shall keep fire extinguishers and other required fire prevention devices at the demised premises in conformity with the requirements and recommendations of the Insurance Services Office of the State of New York.

15. If, by reason of the use of the demised premises by Tenant, insurance rates for the demised premises against loss by fire and extended coverage are increased as compared with the insurance rates now in effect, Tenant agrees to pay as additional



vipin

rent any excess premiums caused thereby. The additional rent shall become due upon affecting the insurance of Landlord and shall be paid with the next succeeding installment of rent.

16. All violations placed upon the demised premises after occupancy by Tenant, by any federal, state, city, county, town, village or governmental agency or department affecting the demised premises caused by Tenant are to be the sole obligation of Tenant in promptly curing the same, and, upon the failure of Tenant to do so, Landlord may elect to cure the same, and all sums thereby expended by the Landlord shall be collectible as additional rent with the next succeeding month's rental.

17. Tenant agrees that Tenant shall keep the sidewalk adjacent to the demised premises clean at all times & shall remove therefrom all rubbish, snow and ice whenever same is present, it being understood that the same is not the obligation of Landlord. It is further understood that Landlord shall not be required to furnish any services or equipment for the removal of rubbish or refuse from the demised premises, but may, nevertheless, require Tenant to have such rubbish and refuse removed at Tenant's sole cost and expense.

18. In the event that legal proceedings are hereafter instituted by Landlord against Tenant, for any breach of the terms of this Lease, Tenant assumes and agrees to pay to Landlord any expenses, costs, reasonable attorney's fees, marshals' fees, etc., that may be incurred by Landlord incidental to and arising out of such legal proceedings, if Landlord succeeds in such proceeding. Where legal services are in an action or proceeding for the collection of rent, the amount to be recovered by Landlord's attorney for same shall be twenty (20%) percent of any recovery, but not less than Seven Hundred Fifty ($750.00) Dollars or the reasonable amount determined by the Court in the event that Landlord is successful in any such proceeding. At the option of the Landlord, attorney's fees may be recovered in the proceedings in which such services are rendered.

19. As a condition of this lease, Landlord agrees to have new gas fired-HVAC units installed in the office and warehouse. All parts, labor and equipment installed shall be warrantied by the installer and/or the manufacturer for a period of at least one year.

20. With the exception of a self-contained garbage dumpster, no merchandise, boxes, receptacles or articles or fixtures of any kind, nature or description are to be placed or stored at or upon the front, side or rear of the demised premises, it being the intention of Landlord to require Tenant to conduct Tenant's business solely within the demised premises.

21. Landlord shall not be held liable for any damage or injury to any property, merchandise, stock of goods, fixtures, furniture or decorations, or to any person or persons at any time in the demised premises or building, from steam, gas, electricity or from water, rain, snow or ice, which may escape, leak or seep into issue or flow from any part of said building of which the demised premises are a part or from the pipes or plumbing works of the same or from the street or cellar or sub-surface or from any other place or quarter; and Tenant hereby agrees not to hold Landlord liable in any way therefor whatsoever unless such damage or injury is due to Landlord's negligence.

22. Tenant hereby represents and agrees that, unless the following substances are kept in sealed drums, Tenant will not at any time bring into, keep, store, use or permit anywhere in the demised premises any loose, exposed or open fluid, chemical substance or material of any inflammable or volatile, combustible or explosive character or substances having or creating any noxious or objectionable odors or fumes. This provision is hereby expressly made a conditional limitation of this lease.

23. Should the demised premises become infested with vermin or rodents, Tenant agrees, at Tenant's own cost and expense, to have such condition remedied within five (5) days after written notice and demand shall have been made by Landlord. In the event that Tenant fails to comply with such notice, Landlord shall have the right, (but not be obligated to do so) to have this work performed by a fumigating or exterminating concern and to charge the cost of such work to Tenant, which shall be collectible as additional rent and shall be payable with the next succeeding month's rent.

24. In the event any payment under this lease shall be made in the form of a check from any other person, firm or corporation other than named in this lease, the acceptance of same by Landlord shall not, under any circumstances, be deemed recognition of a sub-letting or an assignment of this lease regardless of the number of times that such payment shall be made by such other person, firm or corporation.

25. It is mutually agreed by and between Landlord and Tenant that the respective parties hereto shall and they hereby do waive trial by jury in any action, proceeding or counterclaim brought by either of the parties hereto against the other (except for personal injury or property damage) on any matters whatsoever arising out of or in any way connected with this lease, the relationship of Landlord and Tenant, Tenant's use of or occupancy of said demised premises, and any emergency statutory or, for that matter, any other statutory remedy. It is further mutually agreed that in the event Landlord commences any summary proceeding for

non-payment of rent, Tenant will not interpose any counterclaim of whatever nature or description in such proceeding unless rent is paid into a Court escrow fund.

26. Landlord shall not be liable for damage or injury to person or property unless written notice of any defect alleged to have caused such damage or injury shall have been given to Landlord and the Landlord shall have had reasonable and sufficient time before the occurrence of such damage or injury to have enabled the Landlord to correct such defect. Nothing herein contained shall be construed as requiring Landlord to make interior repairs or to impose any additional obligations upon Landlord not specifically provided for in this lease. This Paragraph is intended to be read in conjunction with Paragraphs 1 & 21 of this Rider.

27. The parties hereto each represent to each other that it has not dealt with any broker, agent or finder on its behalf in consummating the transaction described herein or in introducing the parties to each other in connection therewith and neither party has any knowledge of any broker, agent or finder or any person or entity who is entitled or may claim to be entitled to a commission or fee in connection with the transaction described in this lease. The parties agree to indemnify and hold each other harmless from and against any claims, demands, causes of action, losses, damages, liabilities, obligations, costs, charges and attorney's fees or expenses which arise by reason of a claim for commission or fee on account of this transaction described in this lease made by any broker, provided it is finally adjudicated by a court of competent jurisdiction that a commission or fee is due to such broker, agent, finder or other person by reason of their having dealt with the Tenant or having introduced the Tenant to the Landlord in connection with the transaction described in this lease.

28. All permanent installations, additions, hardware, non-trade fixtures and improvements, including the HVAC units referred to in paragraph 19 herein, which may be made or installed by either of the parties hereto in or upon the demised premises and which are in any manner attached to the roof, ceilings, doors, or windows shall be the Landlord's property and shall, upon termination of the term by lapse of time, or otherwise, remain upon and be surrendered with the demised premises as part thereof, all without compensation, allowance or credit to Tenant provided, however, that if prior to such termination or within thirty (30) days thereafter Landlord so directs by notice to Tenant, Tenant shall promptly remove the installations, additions, hardware, non-trade fixtures and improvements which were placed in the demised premises by Tenant and which are designated in the notice failing which Landlord may remove the same and Tenant shall pay the cost and expense thereof, provided however that all installations, additions, and the like introduced by the Tenant for use in the

operation of its business, even if affixed to the Premises, may be removed by Tenant. In that event, Tenant must restore said area to its pre-lease condition. Upon termination of the term of this lease or of Tenant's right to possession, Tenant shall surrender to landlord at the place where rent is payable all keys for the demised premises. Tenant shall prior to any such termination of the term of this lease or of Tenant's right to possession, remove from the demised premises all Tenant's furniture, trade fixtures and other personal property of every kind whatsoever not becoming Landlord's property as hereinbefore specified, and in default of such removal by Tenant, all such property, and every interest of Tenànt in the same, shall be conclusively presumed to have been conveyed by Tenant, all such property, and every interest of Tenant in the same, shall be conclusively presumed to have been conveyed by Tenant to landlord under this lease as a bill of sale without compensation, allowance, or credit to Tenant. Tenant shall, upon such termination of the term of this lease or of Tenant's right to possession, return to Landlord the demised premises in a "broom clean" condition, ordinary wear and tear excepted and all equipment and fixtures comprising a part therein in good repair and condition, ordinary wear and tear excepted.

29. Tenant covenants not to use the buildings on the demised premises for any illegal or unlawful purpose. Tenant shall not at any time use or occupy the demised premises in violation of the Certificate of Occupancy issued for the building or in any way not set forth on the first page of this lease. This provision shall, in no way, limit Landlord's representation that Tenant's use does not violate the Certificate of Occupancy.

30. Tenant shall, before making any alteration, additions, installations, or improvements, obtain all necessary permits, approvals, and certificates required by any governmental agency, department or quasi-governmental body having jurisdiction thereof. In addition, any such work shall be subject to Landlord's consent. Upon completion of Tenant's work, the Tenant shall promptly arrange to have Tenant's work inspected and "signed off" of record by the appropriate governmental agency, department or quasi-governmental body having jurisdiction thereof. In the event the Tenant fails to have Tenant's work inspected, approved and "signed off" of record within a reasonable period of time after the Tenant's work has been completed, the Landlord shall have the right, upon written notice to the Tenant, to thereafter terminate this lease which termination shall be effective ten (10) days after the mailing of the notice of termination. Tenant agrees to carry and will cause Tenant's contractors and sub- contractors to carry such workman's compensation, general liability, personal and property damage insurance as Landlord may require. Tenant agrees to obtain and deliver to Landlord, written and unconditional waivers of mechanic's liens upon the real property in which the

demised premises are located, for all work, labor and services to be performed and materials to be furnished in connection with such work, signed by all contractors, sub- contractors, materialmen and laborers to become involved in such work. Notwithstanding the foregoing, if any mechanic's lien is filed against the demised premises, or the building of which the same forms a part, for work claimed to have been done for, or materials furnished to Tenant, whether or not done pursuant to this paragraph the same shall be discharged by Tenant within ten (10) days thereafter, at Tenant's own cost and expense, by filing the bond required by law.

31. This lease is subject and subordinate to all mortgages which may now or hereafter affect this lease or the real property of which the demised premises are a part and to all renewals, modifications, consolidations, replacements and extensions of any such underlying mortgage. This clause shall be self-operative and no further instrument of subordination shall be required by any mortgagee, affecting any lease or the real property of which the demised premises are a part. In confirmation of such subordination, Tenant shall execute promptly any certificate that owner may request.

32. Tenant covenants and agrees that at all times Tenant's use of electric current shall not exceed the capacity of the existing main electrical service to the building, or lines, meters and circuit panels directly relating to and feeding the demised premises. The Tenant may not use any electrical equipment which, in Landlord's opinion, reasonably exercised, will overload such installations or interfere with the use thereof by other tenants of the building. The change at any time of the character of electric service shall in no way make Landlord liable or responsible to Tenant, for any loss, damages or expenses which Tenant may sustain.

33. INTENTIONALLY DELETED

34. Tenant shall take appropriate action to eliminate any REASONABLE criticism or comply with any recommendation with respect to Tenant's use of the demised premises which any of Landlord's insurance carriers may reasonably make to keep Landlord's insurance in effect. In the event Tenant shall fail to comply herewith, after written notice from Landlord, within the time allowed by said insurance company to keep Landlord's insurance and/or to keep the then current rate, Landlord may take action under Paragraph 15 of this lease to enforce Landlord's rights and/or in the alternative or as additional relief, may do what is necessary to eliminate or comply therewith and in such event, may charge Tenant with the cost of same as additional rent or, at Tenant's option, if such compliance would cost more than $10,000.00, Tenant shall be entitled to terminate the lease, upon

six (6) months notice.

35. Tenant shall, without charge at any time, and from time to time, within ten (10) days after request by Landlord:

a) Certify by written instrument, duly executed, acknowledged and delivered, to any mortgagee, assignee of any mortgage or purchase, or any other person, firm or corporation specified by Landlord:

i) that this lease is unmodified and in full effect (or, if there has been modification that the same is in full force and effect as modified and stating the modifications);

ii) whether or not there are then existing any set-offs or defenses against the enforcement of any of the agreements, terms, covenants, or conditions hereof upon the part of Landlord to be performed or completed with (and, if so, specifying the same); and

iii) the date, if any, to which the rental and other charges hereunder have been paid in advance.

36. If the Landlord or any successor in interest be an individual, joint venture, tenancy in common, co-partnership, unincorporated association, or other unincorporated aggregate of individuals (all of which are referred to below, individually and collectively, as an "unincorporated Landlord"), then, anything elsewhere to the contrary notwithstanding, Tenant shall look solely to the estate and property of such unincorporated Landlord in the Entire Taxpayer for the satisfaction of Tenant's remedies for the collection of a judgment (or other judicial process) requiring the payment of money by Landlord in the event of any default or breach by Landlord with respect to any of the terms, covenants and conditions of the lease to be observed and/or performed by Landlord, and no other property or assets of such unincorporated Landlord shall be subject to the levy, execution or other enforcement procedure for the satisfaction of Tenant's remedies.

37. Should there be any conflict between any provisions in the printed portion of this lease and those contained in the typewritten Rider portion thereof, then the terms, covenants and conditions in the typewritten portion shall be controlling hereunder.

38. (a) Tenant agrees that, at Tenant's sole cost and expense, and in a manner satisfactory to the Landlord, the Tenant



GMEI-00021

shall keep, put, replace and maintain the demised premises and all Tenant's equipment, fixtures, motors, appurtenances, installations and improvements, and every part thereof (except for repairs which the Landlord is required to make as hereinafter set forth) in good repair, good working order and good condition, other than damages caused by Landlord's agents' gross negligence.

(b) Other than specifically set forth herein or in the work letter annexed hereto, it is the intention of the parties and the parties do hereby agree that the sole repairs which the Landlord shall make to the demised premises shall be structural repairs to the exterior walls of the building, the foundation, and the roof, provided, however, that the said repairs are not occasioned, caused or required by reason of the Tenant's operation of Tenant's business in the demised premises, or by Tenant's fixtures and/or equipment, or by a break-in or an attempted break-in to the demised premises, or by reason of any act or acts of commission or omission of the Tenant, Tenant's employees or any licensees, or visitor of the Tenant in which event such repairs shall be made by the Tenant. All other repairs and replacements shall be made by the Tenant at Tenant's own cost and expenses. Doors and glass windows shall not be deemed to be part of the exterior walls, and any repairs or replacements thereto shall be made by the Tenant.

39. INTENTIONALLY DELETED

40. Tenant shall have the right to erect a sign on the building, at the front of the demised premises, provided, however, that the plans for the size, location and type of sign shall first be submitted to Landlord for Landlord's consent, which consent Landlord agrees not to unreasonably withhold. In the event the Landlord consents, as aforesaid, the Tenant agrees that the erection of any such signs shall be in accordance with all applicable laws, orders, rules and regulations of any governmental or municipal agency having jurisdiction thereof. In the event the Landlord or the Landlord's representatives shall deem it necessary to remove any such sign or signs in order to paint the said demised premises or the building wherein same is situated or make any other repairs, alterations or improvements in or upon said demised premises or building or any part thereof, the Landlord shall have the right to do so, providing the same be removed and replaced at the Landlord's expense, whenever the said repairs, alterations or improvements shall be completed.

41. In any action or proceeding by the Tenant against the Landlord, the limit of the Landlord's liability shall be the market value of the subject Premises and no greater.

42. That if Tenant remains in the premises beyond the



uf

expiration of this lease, such holdover shall not be deemed any tenancy but the Tenant shall be a Tenant at sufferance only, on a daily rate equal to two times the rent and other charges under this lease for the last year of this lease.

43. If the original Tenant or any assignee Tenant is a corporation, **ANY** transfer of the corporate stock by sale, assignment, gift, etc., shall be deemed a sale or assignment and shall be subject to all of the terms and conditions of this lease applicable to such sale and assignment. This Paragraph should be read in conjunction with Paragraph 10 herein, specifically 10(f). Specifically, no transfer to any family member of Raj Chopra, Vipin Patel, or Ashwin Patel or to any corporation controlled by them, as defined in Paragraph 10 (f) herein, shalled be deemed a sale or assignment subject to the requirements of said provision.

44. This lease contains the entire agreement between the parties hereto and cannot be changed, modified or altered except by a document in writing, executed and acknowledged by the parties hereto.

**GRAND MACHINERY EXCHANGE, INC.**

**By:** ______________________
**LAWRENCE GOODMAN,** Secretary
**Landlord**

**TISHCON CORP.**

**By:** Vipin, K. Patel, EX-V.P.

**Tenant**



GMEI-00023

**SCHEDULE A**

| Year | $ per sq. ft. | Annual Rent | Monthly Rent |
|---|---|---|---|
| ** 3/1/94 - 2/28/99 | $5.50 | $66,000.00 | $5,500.00 |

** Approximate commencement date; contingent on delivery of premises pursuant to Schedule B annexed hereto.

SCHEDULE B

WORK LETTER

Work to be done by Landlord:

1. Office space painted; new ceiling tiles and carpet. Minimal structural changes. The air conditioning system will provide air conditioning to the office.

2. Roof replaced on building.

3. Windows around building repaired.

4. Warehouse to be power washed; floor and walls painted.

5. New metal overhead doors installed.

6. Floor in rear of warehouse leveled and repaired.

7. Overgrown weeds and general cleanup around building.

8. All other mechanical systems in good working order.

9. Install HVAC system pursuant to Paragraph 19 herein and remove oil tanks.

10. Office to be painted as required.

11. Repair all toilet facilities.

Security Held $18,500 As of 3/19/99
Expires Feb 28th 2004

2/94

# STANDARD FORM OF LOFT LEASE

The Real Estate Board of New York, Inc.

**Agreement of Lease**, made as of this 19 day of March 19 99 ,between

GRAND MACHINERY EXCHANGE, INC.,

party of the first part, hereinafter referred to as OWNER, and

TISHCON CORP., party of the second part, hereinafter referred to as TENANT,

**Witnesseth:** Owner hereby leases to Tenant and Tenant hereby hires from Owner

in the building known as 36 Sylvester Street, Westbury, New York 11590, County of Nassau ~~Borough of~~ , ~~City of New York~~, for the term of five (5) years

(or until such term shall sooner cease and expire as hereinafter provided) to commence on the 1st day of March nineteen hundred and ninety-nine , and to end on the 28th day of February two thousand and four and both dates inclusive, at an annual rental rate of

SEE SCHEDULE A ANNEXED HERETO AND MADE A PART HEREOF.

which Tenant agrees to pay in lawful money of the United States which shall be legal tender in payment of all debts and dues, public and private, at the time of payment, in equal monthly installments in advance on the first day of each month during said term, at the office of Owner or such other place as Owner may designate, without any set off or deduction whatsoever, except that Tenant shall pay the first monthly installment(s) on the execution hereof (unless this lease be a renewal).

In the event that, at the commencement of the term of this lease, or thereafter, Tenant shall be in default in the payment of rent to Owner pursuant to the terms of another lease with Owner or with Owner's predecessor in interest, Owner may at Owner's option and without notice to Tenant add the amount of such arrears to any monthly installment of rent payable hereunder and the same shall be payable to Owner as additional rent.

The parties hereto, for themselves, their heirs, distributees, executors, administrators, legal representatives, successors and assigns, hereby covenant as follows:

**Rent:** 1. Tenant shall pay the rent as above and as hereinafter provided.

**Occupancy:** 2. Tenant shall use and occupy demised premises for Vitamin and food supplement manufacturing and distribution, storage of raw material, work in process or * provided such use is in accordance with the certificate of occupancy for the building, if any, and for no other purpose.

**Alterations:** 3. Tenant shall make no changes in or to the demised premises of any nature without Owner's prior written consent. Subject to the prior written consent of Owner, and to the provisions of this article, Tenant, at Tenant's expense, may make alterations, installations, additions or improvements which are nonstructural and which do not affect utility services or plumbing and electrical lines, in or to the interior of the demised premises using contractors or mechanics first approved in each instance by Owner. Tenant shall, at its expense, before making any alterations, additions, installations or improvements obtain all permits, approval and certificates required by any governmental or quasi-governmental bodies and (upon completion) certificates of final approval thereof and shall deliver promptly duplicates of all such permits, approvals and certificates to Owner. Tenant agrees to carry and will cause Tenant's contractors and sub-contractors to carry such workman's compensation, general liability, personal and property damage insurance as Owner may require. If any mechanic's lien is filed against the demised premises, or the building of which the same forms a part, for work claimed to have been done for, or materials furnished to, Tenant, whether or not done pursuant to this article, the same shall be discharged by Tenant within thirty days thereafter, at Tenant's expense, by payment or filing the bond required by law or otherwise. All fixtures and all paneling, partitions, railings and like installations, installed in the premises at any time, either by Tenant or by Owner on Tenant's behalf, shall, upon installation, become the property of Owner and shall remain upon and be surrendered with the demised premises unless Owner, by notice to Tenant no later than twenty days prior to the date fixed as the termination of this lease, elects to relinquish Owner's right thereto and to have them removed by Tenant, in which event the same shall be removed from the demised premises by Tenant prior to the expiration of the lease, at Tenant's expense. Nothing in this Article shall be construed to give Owner title to or to prevent Tenant's removal of trade fixtures, moveable office furniture and equipment, but upon removal of any such from the premises or upon removal of other installations as may be required by Owner, Tenant shall immediately and at its expense, repair and restore the premises to the condition existing prior to installation and repair any damage to the demised premises or the building due to such removal. All property permitted or required to be removed by Tenant at the end of the term remaining in the premises after Tenant's removal shall be deemed abandoned and may, at the election of Owner, either be retained as Owner's property or removed from the premises by Owner, at Tenant's expense.

**Repairs:** 4. Owner shall maintain and repair the exterior of and the public portions of the building. Tenant shall, throughout the term of this lease, take good care of the demised premises including the bathrooms and lavatory facilities (if the demised premises encompass the entire floor of the building) and the windows and window frames and, the fixtures and appurtenances therein and at Tenant's sole cost and expense promptly make all repairs thereto and to the building, whether structural or non-structural in nature, caused by or resulting from the carelessness, omission, neglect or improper conduct of Tenant, Tenant's servants, employees, invitees, or licensees, and whether or not arising from such Tenant conduct or omission, when required by other provisions of this lease, including Article 6. Tenant shall also repair all damage to the building and the demised premises caused by the moving of Tenant's fixtures, furniture or equipment. All the aforesaid repairs shall be of quality or class equal to the original work or construction. If Tenant falls, after ten days notice, to proceed with due diligence to make repairs required to be made by Tenant, the same may be made by the Owner at the expense of Tenant, and the expenses thereof incurred by Owner shall be collectible, as additional rent, after rendition of a bill or statement therefor. If the demised premises be or become infested with vermin, Tenant shall, at its expense, cause the same to be exterminated. Tenant shall give Owner prompt notice of any defective condition in any plumbing, heating system or electrical lines located in the demised premises and following such notice, Owner shall remedy the condition with due diligence, but at the expense of Tenant, if repairs are necessitated by damage or injury attributable to Tenant, Tenant's servants, agents, employees, invitees or licensees as aforesaid. Except as specifically provided in Article 9 or elsewhere in this lease, there shall be no allowance to the Tenant for a diminution of rental value and no liability on the part of Owner by reason of inconvenience, annoyance or injury to business arising from Owner, Tenant or others making or failing to make any repairs, alterations, additions or improvements in or to any portion of the building or the demised premises or in and to the fixtures, appurtenances or equipment thereof. It is specifically agreed that Tenant shall not be entitled to any set off or reduction of rent by reason of any failure of Owner to comply with the covenants of this or any other article of this lease. Tenant agrees that Tenant's sole remedy at law in such instance will be by way of any action for damages for breach of contract. The provisions of this Article 4 with respect to the making of repairs shall not apply in the case of fire or other casualty with regard to which Article 9 hereof shall apply.

**Window Cleaning:** 5. Tenant will not clean nor require, permit, suffer or allow any window in the demised premises to be cleaned from the outside in violation of Section 202 of the New York State Labor Law or any other applicable law or of the Rules of the Board of Standards and Appeals, or of any other Board or body having or asserting jurisdiction.

**Requirements of Law, Fire Insurance:** 6. Prior to the commencement of the lease term, if Tenant is then in possession, and at all times thereafter Tenant shall, at Tenant's sole cost and expense, promptly comply with all present and future laws, orders and regulations of all state, federal, municipal and local governments, departments, commissions and boards and any direction of any public officer pursuant to law, and all orders, rules and regulations of the New York Board of Fire Underwriters, or the Insurance Services Office, or any similar body which shall impose any violation, order or duty upon Owner or Tenant with respect to the demised premises, whether or not arising out of Tenant's use or manner of use thereof, or, with respect to the building, if arising out of Tenant's use or manner of use of the demised premises of the building (including the use permitted under the lease). Except as provided in Article 30 hereof, nothing herein shall require Tenant to make structural repairs or alterations unless Tenant has, by its manner of use of the demised premises or method of operation therein, violated any such laws, ordinances, orders, rules, regulations or requirements with respect thereto. Tenant shall not do or

* finished product and as office space.

permit any act or thing to be done in or to the demised premises which is contrary to law, or which will invalidate or be in conflict with public liability, fire or other policies of insurance at any time carried by or for the benefit of Owner. Tenant shall not keep anything in the demised premises except as now or hereafter permitted by the Fire Department, Board of Fire Underwriters, Fire Insurance Rating Organization and other authority having jurisdiction, and then only in such manner and such quantity so as not to increase the rate for fire insurance applicable to the building, nor use the premises in a manner which will increase the insurance rate for the building or any property located therein over that in effect prior to the commencement of Tenant's occupancy. If by reason of failure to comply with the foregoing the fire insurance rate shall, at the beginning of this lease or at any time thereafter, be higher than it otherwise would be, then Tenant shall reimburse Owner, as additional rent hereunder, for that portion of all fire insurance premiums thereafter paid by Owner which shall have been charged because of such failure by Tenant. In any action or proceeding wherein Owner and Tenant are parties, a schedule or "make-up" or rate for the building or demised premises issued by a body making fire insurance rates applicable to said premises shall be conclusive evidence of the facts therein stated and of the several items and charges in the fire insurance rates then applicable to said premises. Tenant shall not place a load upon any floor of the demised premises exceeding the floor load per square foot area which it was designed to carry and which is allowed by law. Owner reserves the right to prescribe the weight and position of all safes, business machines and mechanical equipment. Such installations shall be placed and maintained by Tenant, at Tenant's expense, in settings sufficient, in Owner's judgement, to absorb and prevent vibration, noise and annoyance.

**Subordination:** 7. This lease is subject and subordinate to all ground or underlying leases and to all mortgages which may now or hereafter affect such leases or the real property of which demised premises are a part and to all renewals, modifications, consolidations, replacements and extensions of any such underlying leases and mortgages. This clause shall be self-operative and no further instrument or subordination shall be required by any ground or underlying lessor or by any mortgagee, affecting any lease or the real property of which the demised premises are a part. In confirmation of such subordination, Tenant shall from time to time execute promptly any certificate that Owner may request.

**Tenant's Liability Insurance Property Loss, Damage, Indemnity:** 8. Owner or its agents shall not be liable for any damage to property of Tenant or of others entrusted to employees of the building, nor for loss of or damage to any property of Tenant by theft or otherwise, nor for any injury or damage to persons or property resulting from any cause of whatsoever nature, unless caused by or due to the negligence of Owner, its agents, servants or employees; Owner or its agents shall not be liable for any damage caused by other tenants or persons in, upon or about said building or caused by operations in connection of any private, public or quasi public work. If at any time any windows of the demised premises are temporarily closed, darkened or bricked up (or permanently closed, darkened or bricked up, if required by law) for any reason whatsoever including, but not limited to Owner's own acts, Owner shall not be liable for any damage Tenant may sustain thereby and Tenant shall not be entitled to any compensation therefor nor abatement or diminution of rent nor shall the same release Tenant from its obligations hereunder nor constitute an eviction. Tenant shall indemnify and save harmless Owner against and from all liabilities, obligations, damages, penalties, claims, costs and expenses for which Owner shall not be reimbursed by insurance, including reasonable attorney's fees, paid, suffered or incurred as a result of any breach by Tenant, Tenant's agents, contractors, employees, invitees, or licensees, of any covenant or condition of this lease, or the carelessness, negligence or improper conduct of the Tenant, Tenant's agents, contractors, employees, invitees or licensees. Tenant's liability under this lease extends to the acts and omissions of any sub-tenant, and any agent, contractor, employee, invitee or licensee of any sub-tenant. In case any action or proceeding is brought against Owner by reason of any such claim, Tenant, upon written notice from Owner, will, at Tenant's expense, resist or defend such action or proceeding by counsel approved by Owner in writing, such approval not to be unreasonably withheld.

**Destruction, Fire and Other Casualty:** 9. (a) If the demised premises or any part thereof shall be damaged by fire or other casualty, Tenant shall give immediate notice thereof to Owner and this lease shall continue in full force and effect except as hereinafter set forth. (b) If the demised premises are partially damaged or rendered partially unusable by fire or other casualty, the damages thereto shall be repaired by and at the expense of Owner and the rent and other items of additional rent, until such repair shall be substantially completed, shall be apportioned from the day following the casualty according to the part of the premises which is usable. (c) If the demised premises are totally damaged or rendered wholly unusable by fire or other casualty, then the rent and other items of additional rent as hereinafter expressly provided shall be proportionately paid up to the time of the casualty and thenceforth shall cease until the date when the premises shall have been repaired and restored by Owner (or sooner reoccupied in part by Tenant then rent shall be apportioned as provided in subsection (b) above), subject to Owner's right to elect not to restore the same as hereinafter provided. (d) If the demised premises are rendered wholly unusable or (whether or not the demised premises are damaged in whole or in part) if the building shall be so damaged that Owner shall decide to demolish it or to rebuild it, then, in any of such events, Owner may elect to terminate this lease by written notice to Tenant, given within 90 days after such fire or casualty, or 30 days after adjustment of the insurance claim for such fire or casualty, whichever is sooner, specifying a date for the expiration of the lease, which date shall not be more than 60 days after the giving of such notice, and upon the date specified in such notice the term of this lease shall expire as fully and completely as if such date were the date set forth above for the termination of this lease and Tenant shall forthwith quit, surrender and vacate the premises without prejudice however, to Owner's rights and remedies against Tenant under the lease provisions in effect prior to such termination, and any rent owing shall be paid up to such date and any payments of rent made by Tenant which were on account of any period subsequent to such date shall be returned to Tenant. Unless Owner shall serve a termination notice as provided for herein, Owner shall make the repairs and restorations under the conditions of (b) and (c) hereof, with all reasonable expedition, subject to delays due to adjustment of insurance claims, labor troubles and causes beyond Owner's control. After any such casualty, Tenant shall cooperate with Owner's restoration by removing from the premises as promptly as reasonably possible, all of Tenant's salvageable inventory and movable equipment, furniture, and other property. Tenant's liability for rent shall resume five (5) days after written notice from Owner that the premises are substantially ready for Tenant's occupancy. (e) Nothing contained hereinabove shall relieve Tenant from liability that may exist as a result of damage from fire or other casualty. Notwithstanding the foregoing, including Owner's obligation to restore under subparagraph (b) above, each party shall look first to any insurance in its favor before making any claim against the other party for recovery for loss or damage resulting from fire or other casualty, and to the extent that such insurance is in force and collectible and to the extent permitted by law, Owner and Tenant each hereby releases and waives all right of recovery with respect to subparagraphs (b), (d) and (e) above, against the other or any one claiming through or under each of them by way of subrogation or otherwise. The release and waiver herein referred to shall be deemed to include any loss or damage to the demised premises and/or to any personal property, equipment, trade fixtures, goods and merchandise located therein. The foregoing release and waiver shall be in force only if both releasors' insurance policies contain a clause providing that such a release or waiver shall not invalidate the insurance. If, and to the extent, that such waiver can be obtained only by the payment of additional premiums, then the party benefitting from the waiver shall pay such premium within ten days after written demand or shall be deemed to have agreed that the party obtaining insurance coverage shall be free of any further obligation under the provisions hereof with respect to waiver of subrogation. Tenant acknowledges that Owner will not carry insurance on Tenant's furniture and or furnishings or any fixtures or equipment, improvements, or appurtenances removable by Tenant and agrees that Owner will not be obligated to repair any damage thereto or replace the same. (f) Tenant hereby waives the provisions of Section 227 of the Real Property Law and agrees that the provisions of this article shall govern and control in lieu thereof.

**Eminent Domain:** 10. If the whole or any part of the demised premises shall be acquired or condemned by Eminent Do main for any public or quasi public use or purpose, then and in that event, the term of this lease shall cease and terminate from the date of title vesting in such proceeding and Tenant shall have no claim for the value of any unexpired term of said lease. Tenant shall have the right to make an independent claim to the condemning authority for the value of Tenant's moving expenses and personal property, trade fixtures and equipment, provided Tenant is entitled pursuant to the terms of the lease to remove such property, trade fixtures and equipment at the end of the term and provided further such claim does not reduce Owner's award.

**Assignment, Mortgage, Etc.:** 11. Tenant, for itself, its heirs, distributees, executors, administrators, legal representatives, successors and assigns, expressly covenants that it shall not assign, mortgage or encumber this agreement, nor underlet, or suffer or permit the demised premises or any part thereof to be used by others, without the prior written consent of Owner in each instance. Transfer of the majority of the stock of a corporate Tenant or the majority partnership interest of a partnership Tenant shall be deemed an assignment. If this lease be assigned, or if the demised premises or any part thereof be underlet or occupied by anybody other than Tenant, Owner may, after default by Tenant, collect rent from the assignee, under-tenant or occupant, and apply the net amount collected to the rent herein reserved, but no such assignment, underletting, occupancy or collection shall be deemed a waiver of this covenant, or the acceptance of the assignee, under-tenant or occupant as tenant, or a release of Tenant from the further performance by Tenant of covenants on the part of Tenant herein contained. The consent by Owner to an assignment or underletting shall not in any wise be construed to relieve Tenant from obtaining the express consent in writing of Owner to any further assignment or underletting.

**Electric Current:** 12. Rates and conditions in respect to submetering or rent inclusion, as the case may be, to be added in RIDER attached hereto. Tenant covenants and agrees that at all times its use of electric current shall not exceed the capacity of existing feeders to the building or the risers or wiring installation and Tenant may not use any electrical equipment which, in Owner's opinion, reasonably exercised, will overload such installations or interfere with the use thereof by other tenants of the building. The change at any time of the character of electric service shall in no wise make Owner liable or responsible to Tenant, for any loss, damages or expenses which Tenant may sustain.

**Access to Premises:** 13. Owner or Owner's agents shall have the right (but shall not be obligated) to enter the demised premises in any emergency at any time, and, at other reasonable times, to examine the same and to make such repairs, replacements and improvements as Owner may deem necessary and reasonably desirable to any portion of the building or which Owner may elect to perform in the premises after Tenant's failure to make repairs or perform any work which Tenant is obligated to perform under this lease, or for the purpose of complying with laws, regulations and other directions of governmental authorities. Tenant shall permit Owner to use and maintain and replace pipes and conduits in and through the demised premises and to erect new pipes and conduits therein provided, wherever possible, they are within walls or otherwise concealed. Owner may, during the progress of any work in the demised premises, take all necessary materials and equipment into said premises without the same constituting an eviction nor shall the Tenant be entitled to any abatement of rent while such work is in progress nor to any damages by reason of loss or interruption of business or otherwise. Throughout the term hereof Owner shall have the right to enter the demised premises at reasonable hours for the purpose of showing the same to prospective purchasers or mortgagees of the building, and during the last six months of the term for the purpose of showing the same to prospective tenants and may, during said six months period, place upon

Rider to be added if necessary.

the demised premises the usual notices "To Let" and "For Sale" which notices Tenant shall permit to remain thereon without molestation. If Tenant is not present to open and permit an entry into the demised premises, Owner or Owner's agents may enter the same whenever such entry may be necessary or permissible by master key or forcibly and provided reasonable care is exercised to safeguard Tenant's property, such entry shall not render Owner or its agents liable therefor, nor in any event shall the obligations of Tenant hereunder be affected. If during the last month of the term Tenant shall have removed all or substantially all of Tenant's property therefrom. Owner may immediately enter, alter, renovate or redecorate the demised premises without limitation or abatement of rent, or incurring liability to Tenant for any compensation and such act shall have no effect on this lease or Tenant's obligation hereunder.

**Vault, Vault Space, Area:** 14. No Vaults, vault space or area, whether or not enclosed or covered, not within the property line of the building is leased hereunder anything contained in or indicated on any sketch, blue print or plan, or anything contained elsewhere in this lease to the contrary notwithstanding. Owner makes no representation as to the location of the property line of the building. All vaults and vault space and all such areas not within the property line of the building, which Tenant may be permitted to use and/or occupy, is to be used and/or occupied under a revocable license, and if any such license be revoked, or if the amount of such space or area be diminished or required by any federal, state or municipal authority or public utility, Owner shall not be subject to any liability nor shall Tenant be entitled to any compensation or diminution or abatement of rent, nor shall such revocation, diminution or requisition be deemed constructive or actual eviction. Any tax, fee or charge of municipal authorities for such vault or area shall be paid by Tenant, if used by Tenant, whether or not specifically leased hereunder.

**Occupancy:** 15. Tenant will not at any time use or occupy the demised premises in violation of the certificate of occupancy issued for the building of which the demised premises are a part. Tenant has inspected the premises and accepts them as is, subject to the riders annexed hereto with respect to Owner's work, if any. In any event, Owner makes no representation as to the condition of the premises and Tenant agrees to accept the same subject to violations, whether or not of record. If any governmental license or permit shall be required for the proper and lawful conduct of Tenant's business, Tenant shall be responsible for and shall procure and maintain such license or permit.

**Bankruptcy:** 16. (a) Anything elsewhere in this lease to the contrary notwithstanding, this lease may be cancelled by Owner by sending of a written notice to Tenant within a reasonable time after the happening of any one or more of the following events: (1) the commencement of a case in bankruptcy or under the laws of any state naming Tenant as the debtor; or (2) the making by Tenant of an assignment or any other arrangement for the benefit of creditors under any state statute. Neither Tenant nor any person claiming through or under Tenant, or by reason of any statute or order of court, shall thereafter be entitled to possession of the premises demised but shall forthwith quit and surrender the premises. If this lease shall be assigned in accordance with its terms, the provisions of this Article 16 shall be applicable only to the party then owning Tenant's interest in this lease.

(b) It is stipulated and agreed that in the event of the termination of this lease pursuant to (a) hereof, Owner shall forthwith, notwithstanding any other provisions of this lease to the contrary, be entitled to recover from Tenant as and for liquidated damages an amount equal to the difference between the rental reserved hereunder for the unexpired portion of the term demised and the fair and reasonable rental value of the demised premises for the same period. In the computation of such damages the difference between any installment of rent becoming due hereunder after the date of termination and the fair and reasonable rental value of the demised premises for the period for which such installment was payable shall be discounted to the date of termination at the rate of four percent (4%) per annum. If such premises or any part thereof be relet by the Owner for the unexpired term of said lease, or any part thereof, before presentation of proof of such liquidated damages to any court, commission or tribunal, the amount of rent reserved upon such reletting shall be deemed to be the fair and reasonable rental value for the part or the whole of the premises so re-let during the term of the re-letting. Nothing herein contained shall limit or prejudice the right of the Owner to prove for and obtain as liquidated damages by reason of such termination, an amount equal to the maximum allowed by any statute or rule of law in effect at the time when, and governing the proceedings in which, such damages are to be proved, whether or not such amount be greater, equal to, or less than the amount of the difference referred to above.

**Default:** 17. (1) If Tenant defaults in fulfilling any of the covenants of this lease other than the covenants for the payment of rent or additional rent; or if the demised premises becomes vacant or deserted "or if this lease be rejected under §235 of Title 11 of the U.S. Code (bankruptcy code);" or if any execution or attachment shall be issued against Tenant or any of Tenant's property whereupon the demised premises shall be taken or occupied by someone other than Tenant; or if Tenant shall make default with respect to any other lease between Owner and Tenant; or if Tenant shall have failed, after five (5) days written notice, to redeposit with Owner any portion of the security deposited hereunder which Owner has applied to the payment of any rent and additional rent due and payable hereunder or failed to move into or take possession of the premises within thirty (30) days after the commencement of the term of this lease, of which fact Owner shall be the sole judge; then in any one or more of such events, upon Owner serving a written fifteen (15) days notice upon Tenant specifying the nature of said default and upon the expiration of said fifteen (15) days, if Tenant shall have failed to comply with or remedy such default, or if the said default or omission complained of shall be of a nature that the same cannot be completely cured or remedied within said fifteen (15) day period, and if Tenant shall not have diligently commenced during such default within such fifteen (15) day period, and shall not thereafter with reasonable diligence and in good faith, proceed to remedy or cure such default, then Owner may serve a written five (5) days' notice of cancellation of this lease upon Tenant, and upon the expiration of said five (5) days this lease and the term thereunder shall end and expire as fully and completely as if the expiration of such five (5) day period were the day herein definitely fixed for the end and expiration of this lease and the term thereof and Tenant shall then quit and surrender the demised premises to Owner but Tenant shall remain liable as hereinafter provided.

(2) If the notice provided for in (1) hereof shall have been given, and the term shall expire as aforesaid; or if Tenant shall make default in the payment of the rent reserved herein or any item of additional rent herein mentioned or any part of either or in making any other payment herein required; then and in any of such events Owner may without notice, re-enter the demised premises either by force or otherwise, and dispossess Tenant by summary proceedings or otherwise, and the legal representative of Tenant or other occupant of demised premises and remove their effects and hold the premises as if this lease had not been made, and Tenant hereby waives the service of notice of intention to re-enter or to institute legal proceedings to that end. If Tenant shall make default hereunder prior to the date fixed as the commencement of any renewal or extension of this lease, Owner may cancel and terminate such renewal or extension agreement by written notice.

**Remedies of Owner and Waiver of Redemption:** 18. In case of any such default, re-entry, expiration and/or dispossess by summary proceedings or other wise, (a) the rent, and additional rent, shall become due thereupon and be paid up to the time of such re-entry, dispossess and/or expiration, (b) Owner may re-let the premises or any part or parts thereof, either in the name of Owner or otherwise, for a term or terms, which may at Owner's option be less than or exceed the period which would otherwise have constituted the balance of the term of this lease and may grant concessions or free rent or charge a higher rental than that in this lease, (c) Tenant or the legal representatives of Tenant shall also pay Owner as liquidated damages for the failure of Tenant to observe and perform said Tenant's covenants herein contained, any deficiency between the rent hereby reserved and or covenanted to be paid and the net amount, if any, of the rents collected on account of the subsequent lease or leases of the demised premises for each month of the period which would otherwise have constituted the balance of the term of this lease. The failure of Owner to re-let the premises or any part or parts thereof shall not release or affect Tenant's liability for damages. In computing such liquidated damages there shall be added to the said deficiency such expenses as Owner may incur in connection with re-letting, such as legal expenses, reasonable attorneys' fees, brokerage, advertising and for keeping the demised premises in good order or for preparing the same for re-letting. Any such liquidated damages shall be paid in monthly installments by Tenant on the rent day specified in this lease and any suit brought to collect the amount of the deficiency for any month shall not prejudice in any way the rights of Owner to collect the deficiency for any subsequent month by a similar proceeding. Owner, in putting the demised premises in good order or preparing the same for re-rental may, at Owner's option, make such alterations, repairs, replacements, and/or decorations in the demised premises as Owner, in Owner's sole judgment, considers advisable and necessary for the purpose of re-letting the demised premises, and the making of such alterations, repairs, replacements, and/or decorations shall not operate or be construed to release Tenant from liability hereunder as aforesaid. Owner shall in no event be liable in any way whatsoever for failure to re-let the demised premises, or in the event that the demised premises are re-let, for failure to collect the rent thereof under such re-letting, and in no event shall Tenant be entitled to receive any excess, if any, of such net rents collected over the sums payable by Tenant to Owner hereunder. In the event of a breach or threatened breach by Tenant of any of the covenants or provisions hereof, Owner shall have the right of injunction and the right to invoke any remedy allowed at law or in equity as if re-entry, summary proceedings and other remedies were not herein provided for. Mention in this lease of any particular remedy, shall not preclude Owner from any other remedy, in law or in equity. Tenant hereby expressly waives any and all rights of redemption granted by or under any present or future laws.

**Fees and Expenses:** 19. If Tenant shall default in the observance or performance of any term or covenant on Tenant's part to be observed or performed under or by virtue of any of the terms or provisions in any article of this lease, after notice if required and upon expiration of any applicable grace period if any, (except in an emergency), then, unless otherwise provided elsewhere in this lease, Owner may immediately or at any time thereafter and without notice perform the obligation of Tenant thereunder. If Owner, in connection with the foregoing or in connection with any default by Tenant in the covenant to pay rent hereunder, makes any expenditures or incurs any obligations for the payment of money, including but not limited to reasonable attorney's fees, in instituting, prosecuting or defending any action or proceedings, and prevails in any such action or proceeding, then Tenant will reimburse Owner for such sums so paid or obligations incurred with interest and costs. The foregoing expenses incurred by reason of Tenant's default shall be deemed to be additional rent hereunder and shall be paid by Tenant to Owner within ten (10) days of rendition of any bill or statement to Tenant therefor. If Tenant's lease term shall have expired at the time of making of such expenditures or incurring of such obligations, such sums shall be recoverable by Owner as damages.

**Building Alterations and Management:** 20. Owner shall have the right at any time without the same constituting an eviction and without incurring liability to Tenant therefor to change the arrangement and or location of public entrances, passageways, doors, doorways, corridors, elevators, stairs, toilets or other public parts of the building and to change the name, number or designation by which the building may be known. There shall be no allowance to Tenant for diminution of rental value and no liability on the part of Owner by reason of inconvenience, annoyance or injury to business arising from Owner or other Tenant making any repairs in the building or any such alterations, additions and improvements. Furthermore, Tenant shall not have any claim against Owner by reason of Owner's imposition of any controls of the manner of access to the building by Tenant's social or business visitors as the Owner may deem necessary for the security of the building and its occupants.

**No Representations by Owner:** 21. Neither Owner nor Owner's agents have made any representations or promises with respect to the physical condition of the building, the land upon which it is erected or the demised premises, the rents, leases, expenses of operation or any other matter or thing affecting or related to the demised premises or the building except as herein expressly set forth and no rights, easements or licenses are acquired by Tenant by implication or otherwise except as expressly set forth in the provisions of this lease. Tenant has inspected the building and the demised premises and is thoroughly acquainted with their condition and agrees to take the same "as is" on the date possession is tendered and acknowledges that the taking of possession of the demised premises by Tenant shall be conclusive evidence that the said premises and the building of which the same form a part were in good and satisfactory condition at the time such possession was so taken, except as to latent defects. All understandings and agreements heretofore made between the parties hereto are merged in this contract, which alone fully and completely expresses the agreement between Owner and Tenant and any executory agreement hereafter made shall be ineffective to change, modify, discharge or effect an abandonment of it in whole or in part, unless such executory agreement is in writing and signed by the party against whom enforcement of the change, modification, discharge or abandonment is sought.

**End of Term:** 22. Upon the expiration or other termination of the term of this lease, Tenant shall quit and surrender to Owner the demised premises, broom clean, in good order and condition, ordinary wear and damages which Tenant is not required to repair as provided elsewhere in this lease excepted, and Tenant shall remove all its property from the demised premises. Tenant's obligation to observe or perform this covenant shall survive the expiration or other termination of this lease. If the last day of the term of this Lease or any renewal thereof, falls on Sunday, this lease shall expire at noon on the preceding Saturday unless it be a legal holiday in which case it shall expire at noon on the preceding business day.

**Quiet Enjoyment:** 23. Owner covenants and agrees with Tenant that upon Tenant paying the rent and additional rent and observing and performing all the terms, covenants and conditions, on Tenant's part to be observed and performed, Tenant may peaceably and quietly enjoy the premises hereby demised, subject, nevertheless, to the terms and conditions of this lease including, but not limited to, Article 34 hereof and to the ground leases, underlying leases and mortgages hereinbefore mentioned.

**Failure to Give Possession:** 24. If Owner is unable to give possession of the demised premises on the date of the commencement of the term hereof, because of the holding-over or retention of possession of any tenant, undertenant or occupants or if the demised premises are located in a building being constructed, because such building has not been sufficiently completed to make the premises ready for occupancy or because of the fact that a certificate of occupancy has not been procured or if Owner has not completed any work required to be performed by Owner, or for any other reason, Owner shall not be subject to any liability for failure to give possession on said date and the validity of the lease shall not be impaired under such circumstances, nor shall the same be construed in any wise to extend the term of this lease, but the rent payable hereunder shall be abated (provided Tenant is not responsible for Owner's inability to obtain possession or complete any work required) until after Owner shall have given Tenant notice that Owner is able to deliver possession in the condition required by this lease. If permission is given to Tenant to enter into the possession of the demised premises or to occupy premises other than the demised premises prior to the date specified as the commencement of the term of this lease, Tenant covenants and agrees that such possession and/or occupancy shall be deemed to be under all the terms, covenants, conditions and provisions of this lease, except the obligation to pay the fixed annual rent set forth in page one of this lease. The provisions of this article are intended to constitute "an express provision to the contrary" within the meaning of Section 223-a of the New York Real Property Law.

**No Waiver:** 25. The failure of Owner to seek redress for violation of, or to insist upon the strict performance of any covenant or condition of this lease or of any of the Rules or Regulations, set forth or hereafter adopted by Owner, shall not prevent a subsequent act which would have originally constituted a violation from having all the force and effect of an original violation. The receipt by Owner of rent with knowledge of the breach of any covenant of this lease shall not be deemed a waiver of such breach and no provision of this lease shall be deemed to have been waived by Owner unless such waiver be in writing signed by Owner. No payment by Tenant or receipt by Owner of a lesser amount than the monthly rent herein stipulated shall be deemed to be other than on account of the earliest stipulated rent, nor shall any endorsement or statement of any check or any letter accompanying any check or payment as rent be deemed an accord and satisfaction, and Owner may accept such check or payment without prejudice to Owner's right to recover the balance of such rent or pursue any other remedy in this lease provided. All checks tendered to Owner as and for the rent of the demised premises shall be deemed payments for the account of Tenant. Acceptance by Owner of rent from anyone other than Tenant shall not be deemed to operate as an attornment to Owner by the payor of such rent or as a consent by Owner to an assignment or subletting by Tenant of the demised premises to such payor, or as a modification of the provisions of this lease. No act or thing done by Owner or Owner's agents during the term hereby demised shall be deemed an acceptance of a surrender of said premises and no agreement to accept such surrender shall be valid unless in writing signed by Owner. No employee of Owner or Owner's agent shall have any power to accept the keys of said premises prior to the termination of the lease and the delivery of keys to any such agent or employee shall not operate as a termination of the lease or a surrender of the premises.

**Waiver of Trial by Jury:** 26. It is mutually agreed by and between Owner and Tenant that the respective parties hereto shall and they hereby do waive trial by jury in any action, proceeding or counterclaim brought by either of the parties hereto against the other (except for personal injury or property damage) on any matters whatsoever arising out of or in any way connected with this lease, the relationship of Owner and Tenant, Tenant's use of or occupancy of said premises, and any emergency statutory or any other statutory remedy. It is further mutually agreed that in the event Owner commences any proceeding or action for possession including a summary proceeding for possession of the premises, Tenant will not interpose any counterclaim of whatever nature or description in any such proceeding including a counterclaim under Article 4 except for statutory mandatory counterclaims.

Space to be filled in or deleted.

**Inability to Perform:** 27. This Lease and the obligation of Tenant to pay rent hereunder and perform all of the other covenants and agreements hereunder on part of Tenant to be performed shall in no wise be affected, impaired or excused because Owner is unable to fulfill any of its obligations under this lease or to supply or is delayed in supplying any service expressly or impliedly to be supplied or is unable to make, or is delayed in making any repair, additions, alterations or decorations or is unable to supply or is delayed in supplying any equipment, fixtures or other materials if Owner is prevented or delayed from doing so by reason of strike or labor troubles or any cause whatsoever beyond Owner's sole control including, but not limited to, government preemption or restrictions or by reason of any rule, order or regulation of any department or subdivision thereof of any government agency or by reason of the conditions which have been or are affected, either directly or indirectly, by war or other emergency.

**Bills and Notices:** 28. Except as otherwise in this lease provided, a bill statement, notice or communication which Owner may desire or be required to give to Tenant, shall be deemed sufficiently given or rendered if, in writing, delivered to Tenant personally or sent by registered or certified mail addressed to Tenant at the building of which the demised premises form a part or at the last known residence address or business address of Tenant or left at any of the aforesaid premises addressed to Tenant, and the time of the rendition of such bill or statement and of the giving of such notice or communication shall be deemed to be the time when the same is delivered to Tenant, mailed, or left at the premises as herein provided. Any notice by Tenant to Owner must be served by registered or certified mail addressed to Owner at the address first hereinabove given or at such other address as Owner shall designate by written notice.

**Water Charges:** 29. If Tenant requires, uses or consumes water for any purpose in addition to ordinary lavatory pur poses (of which fact Tenant constitutes Owner to be the sole judge) Owner may install a water meter and thereby measure Tenant's water consumption for all purposes. Tenant shall pay Owner for the cost of the meter and the cost of the installation, thereof and throughout the duration of Tenant's occupancy Tenant shall keep said meter and installation equipment in good working order and repair at Tenant's own cost and expense in default of which Owner may cause such meter and equipment to be replaced or repaired and collect the cost thereof from Tenant, as additional rent. Tenant agrees to pay for water consumed, as shown on said meter as and when bills are rendered, and on default in making such payment Owner may pay such charges and collect the same from Tenant, as additional rent. Tenant covenants and agrees to pay, as additional rent, the sewer rent, charge or any other tax, rent, levy or charge which now or hereafter is assessed, imposed or a lien upon the demised premises or the realty of which they are part pursuant to law, order or regulation made or issued in connection with the use, consumption, maintenance or supply of water, water system or sewage or sewage connection or system. If the building or the demised premises or any part thereof is supplied with water through a meter through which water is also supplied to other premises Tenant shall pay to Owner, as additional rent, on the first day of each month, % ($ ) of the total meter charges as Tenant's portion. Independently of and in addition to any of the remedies reserved to Owner hereinabove or elsewhere in this lease, Owner may sue for and collect any monies to be paid by Tenant or paid by Owner for any of the reasons or purposes hereinabove set forth.

**Sprinklers:** 30. Anything elsewhere in this lease to the contrary notwithstanding, if the New York Board of Fire Underwriters or the New York Fire Insurance Exchange or any bureau, department or official of the federal, state or city government recommend or require the installation of a sprinkler system or that any changes, modifications, alterations, or additional sprinkler heads or other equipment be made or supplied in an existing sprinkler system by reason of Tenant's business, or the location of partitions, trade fixtures, or other contents of the demised premises, or for any other reason, or if any such sprinkler system installations, modifications, alterations, additional sprinkler heads or other such equipment, become necessary to prevent the imposition of a penalty or charge against the full allowance for a sprinkler system in the fire insurance rate set by any said Exchange or by any fire insurance company, Tenant shall, at Tenant's expense, promptly make such sprinkler system installations, changes, modifications, alterations, and supply additional sprinkler heads or other equipment as required whether the work involved shall be structural or non-structural in nature. Tenant shall pay to Owner as additional rent the sum of $ , on the first day of each month during the term of this lease, as Tenant's portion of the contract price for sprinkler supervisory service.

**Elevators, Heat, Cleaning:** 31. As long as Tenant is not in default under any the covenants of this lease beyond the applicable grace period provided in this lease for the curing of such defaults, Owner shall: (a) provide necessary passenger elevator facilities on business days from 8 a.m. to 6 p.m. and on Saturdays from 8 a.m. to 1 p.m.; (b) if freight elevator service is provided, same shall be provided only on regular business days Monday through Friday inclusive, and on those days only between the hours of 9 a.m. and 12 noon and between 1 p.m. and 5 p.m.; (c) furnish heat, water and other services supplied by Owner to the demised premises, when and as required by law, on business days from 8 a.m. to 6 p.m. and on Saturdays from 8 a.m. to 1 p.m.; (d) clean the public halls and public portions of the building which are used in common by all tenants. Tenant shall, at Tenant's expense, keep the demised premises, including the windows, clean and in order, to the reasonable satisfaction of Owner, and for that purpose shall employ the person or persons, or corporation approved by Owner. Tenant shall pay to Owner the cost of removal of any of Tenant's refuse and rubbish from the building. Bills for the same shall be rendered by Owner to Tenant at such time as Owner may elect and shall be due and payable hereunder, and the amount of such bills shall be deemed to be, and be paid as, additional rent. Tenant shall, however, have the option of independently contracting for the removal of such rubbish and refuse in the event that Tenant does not wish to have same done by employees of Owner. Under such circumstances, however, the removal of such refuse and rubbish by others shall be subject to such rules and regulations as, in the judgment of Owner, are necessary for the proper operation of the building. Owner reserves the right to stop service of the heating, elevator, plumbing and electric systems, when necessary, by reason of accident, or emergency, or for repairs, alterations, replacements or improvements, in the judgment of Owner desirable or necessary to be made, until said repairs, alterations, replacements or improvements shall have been completed. If the building of which the demised premises are a part supplies manually operated elevator service, Owner may proceed diligently with alterations necessary to substitute automatic control elevator service without in any way affecting the obligations of Tenant hereunder.

**Security:** 32. Tenant has deposited with Owner the sum of $ 18,500.00 as security for the faithful performance and observance by Tenant of the terms, provisions and conditions of this lease; it is agreed that in the event Tenant defaults in respect of any of the terms, provisions and conditions of this lease, including, but not limited to, the payment of rent and additional rent, Owner may use, apply or retain the whole or any part of the security so deposited to the extent required for the payment of any rent and additional rent or any other sum as to which Tenant is in default or for any sum which Owner may expend or may be required to expend by reason of Tenant's default in respect of any of the terms, covenants and conditions of this lease, including but not limited to, any damages or deficiency in the reletting of the premises, whether such damages or deficiency accrued before or after summary proceedings or other re-entry by Owner. In the event that Tenant shall fully and faithfully comply with all of the terms, provisions, covenants and conditions of this lease, the security shall be returned to Tenant after the date fixed as the end of the Lease and after delivery of entire possession of the demised premises to Owner. In the event of a sale of the land and building or leasing of the building, of which the demised premises form a part, Owner shall have the right to transfer the security to the vendee or lessee and Owner shall thereupon be released by Tenant from all liability for the return of such security; and Tenant agrees to look to the new Owner solely for the return of said security, and it is agreed that the provisions hereof shall apply to every transfer or assignment made of the security to a new Owner. Tenant further covenants that it will not assign or encumber or attempt to assign or encumber the monies deposited herein as security and that neither Owner nor its successors or assigns shall be bound by any such assignment, encumbrance, attempted assignment or attempted encumbrance.

**Captions:** 33. The Captions are inserted only as a matter of convenience and for reference and in no way define, limit or describe the scope of this lease nor the intent of any provision thereof.

**Definitions:** 34. The term "Owner" as used in this lease means only the owner of the fee or of the leasehold of the building, or the mortgagee in possession, for the time being of the land and building (or the owner of a lease of the building or of the land and building) of which the demised premises form a part, so that in the event of any sale or sales of said land and building or of said lease, or in the event of a lease of said building, or of the land and building, the said Owner shall be and hereby is entirely freed and relieved of all covenants and obligations of Owner hereunder, and it shall be deemed and construed without further agreement between the parties or their successors in interest, or between the parties and the purchaser, at any such sale, or the said lessee of the building, or of the land and building, that the purchaser or the lessee of the building has assumed and agreed to carry out any and all covenants and obligations of Owner hereunder. The words "re-enter" and "re-entry" as used in this lease are not restricted to their technical legal meaning. The term "rent" includes the annual rental rate whether so expressed or expressed in monthly installments, and "additional rent." "Additional rent" means all sums which shall be due to Owner from Tenant under this lease, in addition to the annual rental rate. The term "business days" as used in this lease, shall exclude Saturdays, Sundays and all days observed by the State or Federal Government as legal holidays and those designated as holidays by the applicable building service union employees service contract or by the applicable Operating Engineers contract with respect to HVAC service. Wherever it is expressly provided in this lease that consent shall not be unreasonably withheld, such consent shall not be unreasonably delayed.

**Adjacent Excavation-Shoring:** 35. If an excavation shall be made upon land adjacent to the demised premises, or shall be authorized to be made, Tenant shall afford to the person causing or authorized to cause such excavation, license to enter upon the demised premises for the purpose of doing such work as said person shall deem necessary to preserve the wall or the building of which demised premises form a part from injury or damage and to support the same by proper foundations without any claim for damages or indemnity against Owner, or diminution or abatement of rent.

**Rules and Regulations:** 36. Tenant and Tenant's servants, employees, agents, visitors, and licensees shall observe faithfully, and comply strictly with, the Rules and Regulations annexed hereto and such other and further reasonable Rules and Regulations as Owner or Owner's agents may from time to time adopt. Notice of any additional rules or regulations shall be given in such manner as Owner may elect. In case Tenant disputes the reasonableness of any additional Rule or Regulation hereafter made or adopted by Owner or Owner's agents, the parties hereto agree to submit the question of the reasonableness of such Rule or Regulation for decision to the New York office of the American Arbitration Association, whose determination shall be final and conclusive upon the parties hereto. The right to dispute the reasonableness of any additional Rule or Regulation upon Tenant's part shall be deemed waived unless the same shall be asserted by service of a notice, in writing upon Owner within fifteen (15) days after the giving of notice thereof. Nothing in this lease contained shall be construed to impose upon Owner any duty or obligation to enforce the Rules and Regulations or terms, covenants or conditions in any other lease, as against any other tenant and Owner shall not be liable to Tenant for violation of the same by any other tenant, its servants, employees, agents, visitors or licensees.

**Glass:** 37. Owner shall replace, at the expense of the Tenant, any and all plate and other glass damaged or broken from any cause whatsoever in and about the demised premises. Owner may insure, and keep insured, at Tenant's expense, all plate and other glass in the demised premises for and in the name of Owner. Bills for the premiums therefor shall be rendered by Owner to Tenant at such times as Owner may elect, and shall be due from, and payable by, Tenant when rendered, and the amount thereof shall be deemed to be, and be paid, as additional rent.

**Estoppel Certificate:** 38. Tenant, at any time, and from time to time, upon at least 10 days' prior notice by Owner, shall execute, acknowledge and deliver to Owner, and/or to any other person, firm or corporation specified by Owner, a statement certifying that this Lease is unmodified in full force and effect (or, if there have been modifications, that the same is in full force and effect as modified and stating the modifications), stating the dates to which the rent and additional rent have been paid, and stating whether or not there exists any default by Owner under this Lease, and, if so, specifying each such default.

**Directory Board Listing:** 39. If, at the request of and as accommodation to Tenant, Owner shall place upon the directory board in the lobby of the building, one or more names of persons other than Tenant, such directory board listing shall not be construed as the consent by Owner to an assignment or subletting by Tenant to such person or persons.

**Successors and Assigns:** 40. The covenants, conditions and agreements contained in this lease shall bind and inure to the benefit of Owner and Tenant and their respective heirs, distributees, executors, administrators, successors, and except as otherwise provided in this lease, their assigns. Tenant shall look only to Owner's estate and interest in the land and building for the satisfaction of Tenant's remedies for the collection of a judgement (or other judicial process) against Owner in the event of any default by Owner hereunder, and no other property or assets of such Owner (or any partner, member, officer or director thereof, disclosed or undisclosed), shall be subject to levy, execution or other enforcement procedure for the satisfaction of Tenant's remedies under or with respect to this lease, the relationship of Owner and Tenant hereunder, or Tenant's use and occupancy of the demised premises.

Space to be filled in or deleted.

SEE RIDER ANNEXED HERETO AND MADE A PART HEREOF.

**In Witness Whereof,** Owner and Tenant have respectively signed and sealed this lease as of the day and year first above written.

Witness for Owner: ..............................

GRAND MACHINERY EXCHANGE, INC.
Landlord ..............................

CORP. SEAL

.............................. [L.S]

Witness for Tenant ..............................

TISHCON CORP.
Tenant ..............................

CORP. SEAL

.............................. [L.S]

GMEI-00030

## ACKNOWLEDGEMENTS

**CORPORATE TENANT**
**STATE OF NEW YORK, ss.:**
**County of**

On this day of , 19 , before me personally came
to me known, who being by me duly sworn, did depose and say that he resides in
that he is the of
the corporation described in and which executed the foregoing instrument, as TENANT; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order.

.....................................................................................

**INDIVIDUAL TENANT**
**STATE OF NEW YORK, ss.:**
**County of**

On this day of , 19 , before me personally came
to be known and known to me to be the individual described in and who, as TENANT, executed the foregoing instrument and acknowledged to me that he executed the same.

.....................................................................................

## IMPORTANT - PLEASE READ

### RULES AND REGULATIONS ATTACHED TO AND MADE A PART OF THIS LEASE IN ACCORDANCE WITH ARTICLE 36.

1. The sidewalks, entrances, driveways, passages, courts, elevators, vestibules, stairways, corridors or halls shall not be obstructed or encumbered by any Tenant or used for any purpose other than for ingress or egress from the demised premises and for delivery of merchandise and equipment in a prompt and efficient manner using elevators and passageways designated for such delivery by Owner. There shall not be used in any space, or in the public hall of the building, either by any Tenant or by jobbers or others in the delivery or receipt of merchandise, any hand trucks, except those equipped with rubber tires and sideguards. If said premises are situated on the ground floor of the building, Tenant thereof shall further, at Tenant's expense, keep the sidewalk and curb in front of said premises clean and free from ice, snow, dirt and rubbish.

2. The water and wash closets and plumbing fixtures shall not be used for any purposes other than those for which they were designed or constructed and no sweepings, rubbish, rags, acids or other substances shall be deposited therein, and the expense of any breakage, stoppage, or damage resulting from the violation of this rule shall be borne by the Tenant who, or whose clerks, agents, employees or visitors, shall have caused it.

3. No carpet, rug or other article shall be hung or shaken out of any window of the building; and no Tenant shall sweep or throw or permit to be swept or thrown from the demised premises any dirt or other substances into any of the corridors of halls, elevators, or out of the doors or windows or stairways of the building and Tenant shall not use, keep or permit to be used or kept any foul or noxious gas or substance in the demised premises, or permit or suffer the demised premises to be occupied or used in a manner offensive or objectionable to Owner or other occupants of the buildings by reason of noise, odors, and or vibrations, or interfere in any way, with other Tenants or those having business therein, nor shall any bicycles, vehicles, animals, fish, or birds be kept in or about the building. Smoking or carrying lighted cigars or cigarettes in the elevators of the building is prohibited.

4. No awnings or other projections shall be attached to the outside walls of the building without the prior written consent of Owner.

5. No sign, advertisement, notice or other lettering shall be exhibited, inscribed, painted or affixed by any Tenant on any part of the outside of the demised premises or the building or on the inside of the demised premises if the same is visible from the outside of the premises without the prior written consent of Owner, except that the name of Tenant may appear on the entrance door of the premises. In the event of the violation of the foregoing by any Tenant, Owner may remove same without any liability and may charge the expense incurred by such removal to Tenant or Tenants violating this rule. Interior signs on doors and directory tablet shall be inscribed, painted or affixed for each Tenant by Owner at the expense of such Tenant, and shall be of a size, color and style acceptable to Owner.

6. No Tenant shall mark, paint, drill into, or in any way deface any part of the demised premises or the building of which they form a part. No boring, cutting or stringing of wires shall be permitted, except with the prior written consent of Owner, and as Owner may direct. No Tenant shall lay linoleum, or other similar floor covering, so that the same shall come in direct contact with the floor of the demised premises, and, if linoleum or other similar floor covering is desired to be used an interlining of builder's deadening felt shall be first affixed to the floor, by a paste or other material, soluble in water, the use of cement or other similar adhesive material being expressly prohibited.

7. No additional locks or bolts of any kind shall be placed upon any of the doors or windows by any Tenant, nor shall any changes be made in existing locks or mechanism thereof. Each Tenant must, upon the termination of his Tenancy, restore to Owner all keys of stores, offices and toilet rooms, either furnished to, or otherwise procured by, such Tenant, and in the event of the loss of any keys, so furnished, such Tenant shall pay to Owner the cost thereof.

8. Freight, furniture, business equipment, merchandise and bulky matter of any description shall be delivered to and removed from the premises only on the freight elevators and through the service entrances and corridors, and only during hours and in a manner approved by Owner. Owner reserves the right to inspect all freight to be brought into the building and to exclude from the building all freight which violates any of these Rules and Regulations of the lease of which these Rules and Regulations are a part.

9. No Tenant shall obtain for use upon the demised premises ice, drinking water, towel and other similar services, or accept barbering or bootblacking services in the demised premises, except from persons authorized by Owner, and at hours and under regulations fixed by Owner. Canvassing, soliciting and peddling in the building is prohibited and each Tenant shall cooperate to prevent the same.

10. Owner reserves the right to exclude from the building all persons who do not present a pass to the building signed by Owner. Owner will furnish passes to persons for whom any Tenant requests same in writing. Each Tenant shall be responsible for all persons for whom he requests such pass and shall be liable to Owner for all acts of such persons. Notwithstanding the foregoing, Owner shall not be required to allow Tenant or any person to enter or remain in the building, except on business days from 8:00 a.m. to 6:00 p.m. and on Saturdays from 8:00 a.m. to 1:00 p.m. Tenant shall not have a claim against Owner by reason of Owner excluding from the building any person who does not present such pass.

11. Owner shall have the right to prohibit any advertising by any Tenant which in Owner's opinion, tends to impair the reputation of the building or its desirability as a loft building, and upon written notice from Owner, Tenant shall refrain from or discontinue such advertising.

12. Tenant shall not bring or permit to be brought or kept in or on the demised premises, any inflammable, combustible, or explosive, or hazardous fluid, material, chemical or substance, or cause or permit any odors of cooking or other processes, or any unusual or other objectionable odors to permeate in or emanate from the demised premises.

13. Tenant shall not use the demised premises in a manner which disturbs or interferes with other Tenants in the beneficial use of their premises.

Address

Premises

TO

**STANDARD FORM OF**
**Loft Lease**



Dated 19

Rent Per Year

Rent Per Month

Term
From
To

Drawn by ..............................
Checked by ..............................
Entered by ..............................
Approved by ..............................

Curnent

RIDER TO LEASE

DATED: March 19, 1999

TERM: March 1, 1999 - February 29, 2004

PREMISES: 36 Sylvester Street
Westbury, New York
(approximately 12,000 square feet)

LANDLORD: Grand Machinery Exchange, Inc.
215 Centre Street
New York, New York 10013

TENANT: Tishcon Corp.
36 Sylvester Street
Westbury, New York 11590

1. Tenant agrees to exonerate, save harmless, protect, defend and indemnify the Landlord or any owner of the demised premises from any and all losses, damages, claims, suits or actions, judgments and costs, which may arise or grow out of any injury to or death of persons or damage to property in any manner whatsoever arising out of the acts or omissions of, or use by Tenant, Tenant's agents, servants, employees, guests or customers of the demised premises. Excepted from Tenant's liability are events specifically caused by Landlord's negligent acts.

2. (a) Tenant agrees to procure and keep in force during the term of this lease for Tenant's own benefit and for the benefit of Landlord, a comprehensive general public liability insurance policy in standard form protecting Tenant and Landlord against any liability whatsoever occasioned by accident or disaster on or about the demised premises or any appurtenances thereto. Such comprehensive general public liability insurance policy shall be written by a good and solvent company, licensed by the Superintendent of Insurance of the State of New York, with limits of liability of not less than One Million ($1,000,000.00) Dollars bodily injury for one (1) person in one (1) accident or occurrence and/or Two Million ($2,000,000.00)

Dollars bodily injury for two (2) or more persons in one (1) accident or occurrence, and property damage insurance in the amount of Five Hundred Thousand ($500,000.00) Dollars. The Landlord, and the holder of any mortgage on the property in which the demised premises form a part, and Tenant shall be named as insured in such policy. Should additional liability insurance be obtained by Tenant, the same shall include Landlord, and the holder of any mortgage on the property in which the demised premises form a part, as an insured. A copy of said comprehensive general public liability insurance policy shall be delivered to Landlord by Tenant prior to the commencement date of this lease and thereafter at least thirty (30) days prior to the expiration of any such insurance policy.

(b) All premiums on such policies shall be paid by the Tenant when due. In the event, however, that the Tenant should fail to pay any such premium when due and exhibit proof of such payment to the Landlord not less than thirty (3) days prior to the due date, if requested to do so by the Landlord, the Landlord may pay the amount of such premium and the amount so advanced by the landlord with interest thereon at the then legal rate from the date of payment shall be considered additional rent, and shall be due and payable with said interest with the next installment of rent becoming due on the next rent day after such payment.

(c) Tenant shall observe and comply with the requirements of all policies of general public liability insurance and shall not violate or permit to be violated any of the conditions of the said general public liability insurance policy.

3. All policies of insurance provided for in this lease shall contain, if available, a provision that the insurance company at least thirty (30) days prior to cancellation and/or renewals must notify the Landlord accordingly.

4. Except as provided herein, the tenant shall throughout the term of this lease pay all and any utility charges for utilities used at the demised premises, including, but not limited to, electricity, for which Tenant shall have a separate meter, water, and telephone.

5. Tenant shall, at Tenant's own cost and expense and

upon Tenant's own responsibility, apply for and obtain any necessary permits and other licenses for the use, conduct and maintenance of the business to be conducted in the demised premises. The Tenant shall also pay all fees in connection with any licenses or permits required by the local municipal authority for any equipment or machinery at the demised premises whether owned by the Landlord or the Tenant.

6. Tenant shall, at all times during the term of this lease, at Tenant's sole cost and expense, promptly comply with all present and future laws, orders and regulations issued or promulgated by the Environmental Protection Administration and of any other governmental or quasi governmental agency, whether of federal, state, city, county, town, village or other municipal level, regulating or otherwise asserting jurisdiction over air or other ecological environmental pollutants. In the event such compliance "materially" effects Tenant's ability to operate its business at the Premises, Tenant shall have the option to terminating this Lease upon six (6) months notice to Landlord. For purposes of this Paragraph, the word "materially" shall be defined as causing an expenditure of more than $10,000.00.

7. Any notice by either party to the other shall be in writing and shall be deemed to be duly given only if mailed by certified mail, return receipt requested, in a postpaid envelope, addressed: (a) If to Tenant, at the demised premises,, with a copy by like memo to Aufrichtig, Stein & Aufrichtig, 300 E. 42nd St., N.Y., N.Y. 10017; (b) If to Landlord, at the address set forth hereinabove, or at any such other address as Landlord may from time to time designate by notice given to Tenant with a copy by like memo to Donald Eng, Esq., 1001 Avenue of the Americas, Suite 2403, New York, New York 10018, or such other attorney, as designated. Notices shall be deemed given or made two days after the date of mailing.

8. (a) Except as contained in this Lease, neither Landlord nor Landlord's agents have made any representations or promises with respect to the physical condition of the building, the land upon which it is erected or the demised premises, the rent, leases, expenses of operation or any other matter or thing affecting or related to the demised premises except as herein expressly set forth and no rights, easements or licenses are acquired by Tenant by implication or otherwise except as

expressly set forth in the provisions of this lease. Tenant has inspected the building and the demised premises and is thoroughly acquainted with their condition, and agrees to take the same "AS IS" and acknowledges that the taking of possession of the demised premises by Tenant shall be conclusive evidence that the demised premises and the building of which the same form a part were in good and satisfactory condition at the time such possession was so taken. All understandings and agreements heretofore made between the parties hereto are merged in this contract, which alone fully and completely expresses the agreement between Landlord and Tenant and any executory agreement hereafter made shall be ineffective to change, modify, discharge or effect an abandonment of it in whole or in part, unless such executory agreement is in writing and signed by the party against whom enforcement of the change, modification, discharge or abandonment is sought.

9. Landlord represents that the Tenant's intended use of the Premises, as represented to Landlord by Tenant, does not violate the Certificate of Occupancy nor the applicable rules of The Board of Fire Underwriters.

10. Landlord agrees not to unreasonably withhold Landlord's consent to the assignment or sublease of the within lease upon the following terms and conditions:

(a) That at the time of such assignment or sublease Tenant is not in default under any of the terms and conditions required to be performed by Tenant under this lease.

(b) That there is forwarded to Landlord an executed duplicate original of the assignment of lease or sublease in proper form for recording, together with an agreement by the assignee or sublessee assuming all of the terms, covenants and conditions of this lease to be performed by Tenant.

(c) That there is deposited with Landlord an additional one month's security for each and every assignment or sublease of this lease.

(d) That Landlord shall be paid by the assignor or sublessor the sum of One Thousand Five Hundred ($1,500.00) Dollars as a processing fee.

(e) That in no event shall any assignor or sublessor be relieved of any liability under this lease.

(f) That Tenant is specifically permitted to sublet or assign this Lease to an "affiliated" entity of Tenant without having to comply with the requirements or paragraphs (c) and (d) herein. For purposes of this Paragraph, "affiliated" shall be defined as either an entity in which the Tenant owns at least 50% or to relatives of the two largest shareholders of Tenant, i.e. Raj K. Chopra, President and Vipin Patel or to Ashwin Patel or a designee of Ashwin Patel.

11. INTENTIONALLY DELETED.

12. INTENTIONALLY DELETED.

13. INTENTIONALLY DELETED.

14. The Tenant shall keep fire extinguishers and other required fire prevention devices at the demised premises as required by law.

15. If, by reason of the use of the demised premises by Tenant, insurance rates for the demised premises against loss by fire and extended coverage are increased as compared with the insurance rates now in effect, Tenant agrees to pay as additional rent any excess premiums caused thereby. The additional rent shall become due upon affecting the insurance of Landlord and shall be paid with the next succeeding installment of rent.

16. All violations placed upon the demised premises after occupancy by Tenant, by any federal, state, city, county, town, village or governmental agency or department affecting the demised premises caused by Tenant are to be the sole obligation of Tenant in promptly curing the same, and, upon the failure of Tenant to do so, Landlord may elect to cure the same, and all sums thereby expended by the Landlord shall be collectible as additional rent with the next succeeding month's rental.

17. Tenant agrees that Tenant shall keep the sidewalk adjacent to the demised premises clean at all times and shall remove therefrom all rubbish, snow and ice whenever same is present, it being understood that the same is not the obligation

of Landlord. It is further understood that Landlord shall not be required to furnish any services or equipment for the removal of rubbish or refuse from the demised premises, but may, nevertheless, require Tenant to have such rubbish and refuse removed at Tenant's sole cost and expense.

18. In the event that legal proceedings are hereafter instituted by Landlord against Tenant, for any breach of the terms of this Lease, Tenant assumes and agrees to pay to Landlord any expenses, costs, reasonable attorney's fees, marshals' fees, etc., that may be incurred by Landlord incidental to and arising out of such legal proceedings, if Landlord succeeds in such proceeding. Where legal services are in an action or proceeding for the collection of rent, the amount to be recovered by Landlord's attorney for same shall be twenty (20%) percent of any recovery, but not less than Seven Hundred Fifty ($750.00) Dollars or the reasonable amount determined by the Court in the event that Landlord is successful in any such proceeding. At the option of the Landlord, attorney's fees may be recovered in the proceedings in which such services are rendered.

19. INTENTIONALLY DELETED.

20. With the exception of a self-contained garbage dumpster, no merchandise, boxes, receptacles or articles or fixtures of any kind, nature or description are to be placed or stored at or upon the front, side or rear of the demised premises, it being the intention of Landlord to require Tenant to conduct Tenant's business solely within the demised premises.

21. Landlord shall not be held liable for any damage or injury to any property, merchandise, stock of goods, fixtures, furniture or decorations, or to any person or persons at any time in the demised premises or building, from steam, gas, electricity or from water, rain, snow or ice, which may escape, leak or seep into issue or flow from any part of said building of which the demised premises are a part or from the pipes or plumbing works of the same or from the street or cellar or sub-surface or from any other place or quarter; and Tenant hereby agrees not to hold Landlord liable in any way therefor whatsoever unless such damage or injury is due to Landlord's negligence.

22. Tenant hereby represents and agrees that, unless the following substances are kept in sealed drums, Tenant will not at any time bring into, keep, store, use or permit anywhere in the demised premises any loose, exposed or open fluid, chemical substance or material of any inflammable or volatile, combustible or explosive character or substances having or creating any noxious or objectionable odors or fumes. This provision is hereby expressly made a conditional limitation of this lease.

23. Should the demised premises become infested with vermin or rodents, Tenant agrees, at Tenant's own cost and expense, to have such condition remedied within five (5) days after written notice and demand shall have been made by Landlord. In the event that Tenant fails to comply with such notice, Landlord shall have the right, (but not be obligated to do so) to have this work performed by a fumigating or exterminating concern and to charge the cost of such work to Tenant, which shall be collectible as additional rent and shall be payable with the next succeeding month's rent.

24. In the event any payment under this lease shall be made in the form of a check from any other person, firm or corporation other than named in this lease, the acceptance of same by Landlord shall not, under any circumstances, be deemed recognition of a sub-letting or an assignment of this lease regardless of the number of times that such payment shall be made by such other person, firm or corporation.

25. It is mutually agreed by and between Landlord and Tenant that the respective parties hereto shall and they hereby do waive trial by jury in any action or proceeding on any matters whatsoever arising out of or in any way connected with this lease, the relationship of Landlord and Tenant, Tenant's use of or occupancy of said demised premises (except for personal injury or property damage). It is further mutually agreed that in the event Landlord commences any summary proceeding against the Tenant, Tenant will not interpose any counterclaim of whatever nature or description in such proceeding unless all rent and/or use and occupancy due to the Landlord is paid into a court escrow fund.

26. Landlord shall not be liable for damage or injury to



GMEI-00038

person or property unless written notice of any defect alleged to have caused such damage or injury shall have been given to Landlord and the Landlord shall have had reasonable and sufficient time before the occurrence of such damage or injury to have enabled the Landlord to correct such defect. Nothing herein contained shall be construed as requiring Landlord to make interior repairs or to impose any additional obligations upon Landlord not specifically provided for in this lease. This Paragraph is intended to be read in conjunction with Paragraphs 1 & 21 of this Rider.

27. The parties hereto each represent to each other that it has not dealt with any broker, agent or finder on its behalf in consummating the transaction described herein or in introducing the parties to each other in connection therewith and neither party has any knowledge of any broker, agent or finder or any person or entity who is entitled or may claim to be entitled to a commission or fee in connection with the transaction described in this lease. The parties agree to indemnify and hold each other harmless from and against any claims, demands, causes of action, losses, damages, liabilities, obligations, costs, charges and attorney's fees or expenses which arise by reason of a claim for commission or fee on account of this transaction described in this lease made by any broker, provided it is finally adjudicated by a court of competent jurisdiction that a commission or fee is due to such broker, agent, finder or other person by reason of their having dealt with the Tenant or having introduced the Tenant to the Landlord in connection with the transaction described in this lease.

28. All permanent installations, additions, hardware, non-trade fixtures and improvements, including the HVAC units referred to in paragraph 19 herein, which may be made or installed by either of the parties hereto in or upon the demised premises and which are in any manner attached to the roof, ceiling, doors, or windows shall be the Landlord's property and shall, upon termination of the term lapse of time, or otherwise, remain upon and be surrendered with the demised premises as part thereof, all without compensation, allowance or credit to Tenant provided, however, that if prior to such termination or within thirty (30) days thereafter Landlord so directs by notice to Tenant, Tenant shall promptly remove the installations, additions, hardware, non-trade fixtures and improvements which

were placed in the demised premises by Tenant and which are designated in the notice failing which Landlord may remove the same and Tenant shall pay the cost and expense thereof, provided however that all installations, additions, and the like introduced by the Tenant for use in the operation of its business, even if affixed to the Premises, may be removed by Tenant. In that event, Tenant must restore said area to its pre-lease condition. Upon termination of the term of this lease or of Tenant's right to possession, Tenant shall surrender to landlord at the place where rent is payable all keys for the demised premises. Tenant shall prior to any such termination of the term of this lease or of Tenant's right to possession, remove from the demised premises all Tenant's furniture, trade fixtures and other personal property of every kind whatsoever not becoming Landlord's property as hereinbefore specified, and in default of such removal by Tenant, all such property, and every interest of Tenant in the same, shall be conclusively presumed to have been conveyed by Tenant to Landlord under this lease as a bill of sale without compensation, allowance, or credit to Tenant. Tenant shall, upon such termination of the term of this lease or of Tenant's right to possession, return to Landlord the demised premises in a "broom clean" condition, ordinary wear and tear excepted and all equipment and fixtures comprising a part therein in good repair and condition, ordinary wear and tear excepted.

29. Tenant covenants not to use the buildings on the demised premises for any illegal or unlawful purpose. Tenant shall not at any time use or occupy the demised premises in violation of the Certificate of Occupancy issued for the building or in any way not set forth on the first page of this lease. This provision shall, in no way, limit Landlord's representation that Tenant's use does not violate the Certificate of Occupancy.

30. Tenant shall, before making any alteration, additions, installations, or improvements, obtain all necessary permits, approvals, and certificates required by any governmental agency, department or quasi-governmental body having jurisdiction thereof. In addition, any such work shall be subject to Landlord's consent. Upon completion of Tenant's work, the Tenant shall promptly arrange to have Tenant's work inspected and "signed off" of record by the appropriate governmental agency, department or quasi-governmental body having

jurisdiction thereof. In the event the Tenant fails to have Tenant's work inspected, approved and "signed off" of record within a reasonable period of time after the Tenant's work as been completed, the Landlord shall have the right, upon written notice to the Tenant, to thereafter terminate this lease which termination shall be effective ten (10) days after the mailing of the notice of termination. Tenant agrees to carry and will cause Tenant's contractors and sub-contractors to carry such workman's compensation, general liability, personal and property damage insurance as Landlord may require. Tenant agrees to obtain and deliver to Landlord, written and unconditional waivers of mechanic's liens upon the real property in which the demised premises are located, for all work, labor and services to be performed and materials to be furnished in connection with such work, signed by all contractors, sub-contractors, materialmen and laborers to become involved in such work. Notwithstanding the foregoing, if any mechanic's lien is filed against the demised premises, or the building of which the same forms a part, for work claimed to have been done for, or materials furnished to Tenant, whether or not done pursuant to this paragraph the same shall be discharged by Tenant within ten (10) days thereafter, at Tenant's own cost and expense, by filing the bond required by law.

31. This lease is subject and subordinate to all mortgages which may now or hereafter affect this lease or the real property of which the demised premises are a part and to all renewals, modifications, consolidations, replacements and extensions of any such underlying mortgage. This clause shall be self-operative and no further instrument of subordination shall be required by any mortgagee, affecting any lease or the real property of which the demised premises are a part. In confirmation of such subordination, Tenant shall execute promptly any certificate that owner may request.

32. Tenant covenants and agrees that at all times Tenant's use of electric current shall not exceed the capacity of the existing main electrical service to the building, or lines, meters and circuit panels directly relating to and feeding the demised premises. The Tenant may not use any electrical equipment which, in Landlord's opinion, reasonably exercised, will overload such installations or interfere with the use thereof by other tenants of the building. The change at any

time of the character of electric service shall in no way make Landlord liable or responsible to Tenant, for any loss, damages or expenses which Tenant may sustain.

33. INTENTIONALLY DELETED.

34. Tenant shall take appropriate action to eliminate any REASONABLE criticism or comply with any recommendation with respect to Tenant's use of the demised premises which any of Landlord's insurance carriers may reasonably make to keep Landlord'' insurance in effect. In the event Tenant shall fail to comply herewith, after written notice from Landlord, within the time allowed by said insurance company to keep Landlord's insurance and/or to keep the then current rate, Landlord may take action under Paragraph 15 of this lease to enforce Landlord's rights and/or in the alternative or as additional relief, may do what is necessary to eliminate or comply therewith and in such event, may charge Tenant with the cost of same as additional rent or, at Tenant's option, if such compliance would cost more than $10,000.00, Tenant shall be entitled to terminate the lease, upon six (6) months notice.

35. Tenant shall, without charge at any time, and from time to time, within ten (10) days after request by Landlord:

a) Certify by written instrument, duly executed, acknowledged and delivered, to any mortgagee, assignee of any mortgage or purchase, or any other person, firm or corporation specified by Landlord:

i) that this lease is unmodified and in full effect (or, if there has been modification that the same is in full force and effect as modified and stating the modifications);

ii) whether or not there are then existing any set-offs or defenses against the enforcement of any of the agreements, terms, covenants, or conditions hereof upon the part of Landlord to be performed or completed with (and, if so, specifying the same); and

iii) the date, if any, to which the rental and other charges hereunder have been paid in advance.

36. If the Landlord or any successor in interest be an individual, joint venture, tenancy in common, co-partnership, unincorporated association, or other unincorporated aggregate of individuals (all of which are referred to below, individually and collectively, as an "unincorporated Landlord"), then, anything elsewhere to the contrary notwithstanding, Tenant shall look solely to the estate and property of such unincorporated Landlord in the Entire Taxpayer for the satisfaction of Tenant's remedies for the collection of a judgment (or other judicial process) requiring the payment of money by landlord in the event of any default or breach by Landlord with respect to any of the terms, covenants and conditions of the lease to be observed and/or performed by Landlord, and no other property or assets of such unincorporated Landlord shall be subject to the levy, execution or other enforcement procedure for the satisfaction of Tenant's remedies.

37. Should there be any conflict between any provisions in the printed portion of this lease and those contained in the typewritten Rider portion thereof, then the terms, covenants and conditions in the typewritten portion shall be controlling hereunder.

38. (a) Tenant agrees that, at Tenant's sole cost and expense, and in a manner satisfactory to the Landlord, the Tenant shall keep, put, replace and maintain the demised premises and all Tenant's equipment, fixtures, motors, appurtenances, installations and improvements, and every part thereof (except for repairs which the Landlord is required to make as hereinafter set forth) in good repair, good working order and good condition, other than damages caused by Landlord's agents' gross negligence.

(b) Other than specifically set forth herein, it is the intention of the parties and the parties do hereby agree that the sole repairs which the Landlord shall make to the demised premises shall be structural repairs to the exterior walls of the building, the foundation, and the roof, provided, however, that the said repairs are not occasioned, caused or required by reason of the Tenant's operation of Tenant's business in the demised premises, or by Tenant's fixtures and/or equipment, or by a break-in or an attempted break-in to the demised premises, or by reason of any act or acts of commission of omission of the Tenant, Tenant's employees or any licensees, or visitor of the Tenant in which event such repairs shall be made by the Tenant. All other repairs and replacements shall be made by the Tenant at Tenant's own cost and expenses. Doors and glass windows shall not be deemed to be part of the exterior walls, and any repairs or replacements thereto shall be made by the Tenant.

39. INTENTIONALLY DELETED

40. Tenant shall have the right to erect a sign on the building, at the front of the demised premises, provided, however, that the plans for the size, location and type of sign shall first be submitted to Landlord for Landlord's consent, which consent Landlord agrees not to unreasonably withhold. In the event the Landlord consents, as aforesaid, the Tenant agrees that the erection of any such signs shall be in accordance with all applicable laws , orders , rules and regulations of any governmental or municipal agency having jurisdiction thereof.

41. In any action or proceeding by the Tenant against the Landlord, the limit of the Landlord's liability shall be the market value of the subject Premises and no greater.

42. That if Tenant remains in the premises beyond the expiration of this lease, such holdover shall not be deemed any tenancy but the Tenant shall be a Tenant at sufferance only, on a daily rate equal to two times the rent and other charges under this lease for the last year of this lease.

43. If the original Tenant or any assignee Tenant is a corporation, ANY transfer of the corporate stock by sale, assignment, gift, etc., shall be deemed a sale or assignment and shall be subject to all of the terms and conditions of this lease applicable to such sale and assignment. This paragraph should be read in conjunction with Paragraph 10 herein, specifically 10(f). Specifically, no transfer to any family member of Raj Chopra, Vipin Patel, or Ashwin Patel or to any corporation controlled by them, as defined in Paragraph 10(f) herein, shall be deemed a sale or assignment subject to the requirements of said provision.

# SCHEDULE A

| YEAR | ANNUAL RENT | MONTHLY RENT |
|---|---|---|
| 3/1/99 - 2/29/00 | $69,300.00 | $5,775.00 |
| 3/1/00 - 2/28/01 | $69,300.00 | $5,775.00 |
| 3/1/01 - 2/28/02 | $70,950.00 | $5,912.50 |
| 3/1/02 - 2/28/03 | $72,600.00 | $6,050.00 |
| 3/1/03 - 2/29/04 | $74,250.00 | $6,187.50 |

# LEASE EXTENSION AGREEMENT

Lease Extension Agreement, made as of February 26, 2004, between GRAND MACHINERY EXCHANGE, INC., 215 Centre Street, New York, New York 10013, Landlord, and TISHCON CORP., 30 New York Avenue, Westbury, New York 11590, Tenant for the premises known as 36 Sylvester Street, Westbury, New York 11590, entire building.

Whereas, the previous Lease, dated March 19, 1999, for the above premises expires February 29, 2004

Whereas, the Landlord and Tenant desire to extend said lease for three additional years.

The parties agree as follows:

1. The term of the lease is hereby extended for a three year period, commencing March 1, 2004 and ending February 28, 2007.

2. The amount of rent for the period of this extension shall be:

| Period | Monthly | Annual |
|---|---|---|
| March 1, 2004 – February 28, 2005 | $6,750.00 | $81,000.00 |
| March 1, 2005 – February 28, 2006 | $7,087.50 | $85,050.00 |
| March 1, 2006 – February 28, 2007 | $7,441.87 | $89,302.50 |

3. The security deposit shall be increased to $22,325.61.

4. Except as modified herein, all of the other terms and conditions of the Agreement of Lease are to remain unchanged and shall be in full force and effect for the term as herein extended.

5. This agreement may not be changed orally and shall only be changed in writing signed by both parties.

6. This agreement shall bind and inure to the benefit of each of the parties hereto and their successors and assigns.

GRAND MACHINERY EXCHANGE, INC.
Landlord

By: ______________________

TISHCON CORP.
Tenant

By: ______________________

Lease Extension Agreement

Lease Extension Agreement, made as of March 1, 2007 Through February 2 8, 2010, between Grand Machinery Exchange Inc.(Landlord), 1765 Expressway Drive North Hauppauge, NY 11788 and Tishcon Corp. 30 New York Ave. Westbury NY 11590 as Tenant for the premises known as 36 Sylvester St. Westbury, NY 11590 entire building and property

Whereas, the lease dated February 28, 2004 for the above premises expires February28, 2007

Whereas, the Landlord and Tenant desires to extend said lease for an additional 3 (three) year.

The parties agree as follows:

1. The term of the lease is hereby extended for a 3 (three) year period, commencing March 1, 2007 and ending February 28, 2010.

2. The amount of rent for the period of this extension shall be:

| Period | Monthly | Annual |
|---|---|---|
| March 1, 2007 – February 28, 2008 | $7,702.33 | $92,427.96 |
| March 1, 2008 – February 28, 2009 | $7,971.91 | $96,662.92 |
| March 1, 2009 – February 28, 2010 | $8,250.93 | $99,011.16 |

3. The security shall be increased to $23,106.99. Current security held is $22,325.61.

4. Except as modified herein, all of the other terms and conditions of the Agreement of lease are to remain unchanged and shall be in full force and effect for the term as herein extended.

5. This agreement may not be changed orally and shall only be changed in writing signed by both parties.

6. This agreement shall bind and inure to the benefit of each of the parties hereto and their successors and assigns.

Grand Machinery Exchange Inc.
Landlord

Tishcon Corp.
Tenant

By:____________________

BY:____________________

Copy

Original Mailed 1/9/07

Tishcon

[redacted]

Lease Extension Agreement

Lease Extension Agreement, made as of March 1, 2007 Through February 2 8, 2010, between Grand Machinery Exchange Inc.(Landlord) , 1765 Expressway Drive North Hauppauge, NY 11788 and Tishcon Corp. 30 New York Ave. Westbury NY 11590 as Tenant for the premises known as 36 Sylvester St. Westbury, NY 11590 entire building and property

Whereas, the lease dated March 1, 2007 for the above premises expires February 28, 2010

Whereas, the Landlord and Tenant desire to extend said lease for an additional 3 (three) years,

The parties agree as follows:

1. The term of the lease is hereby extended for a 3 (three) year period, commencing March 1, 2010 and ending February 28, 2013.

2. The amount of rent for the period of this extension shall be:

| Period | Monthly | Annual |
|---|---|---|
| March 1, 2010 – February 28, 2011 | $8,580.00 | $102,960.00 |
| March 1, 2011 – February 28, 2012 | $8,925.00 | $107,100.00 |
| March 1, 2012 – February 28, 2013 | $9,280.00 | $111,360.00 |

3. The security shall be increased to $25,750.00. Current security held is $23,106.99.

4. Except as modified herein, all of the other terms and conditions of the Agreement of lease are to remain unchanged and shall be in full force and effect for the term as herein extended.

5. This agreement may not be changed orally and shall only be changed in writing signed by both parties.

6. This agreement shall bind and inure to the benefit of each of the parties hereto and their successors and assigns.

Grand Machinery Exchange Inc.
Landlord

By: ______________________

Tishcon Corp.
Tenant

BY: ______________________
Sr. V.P.
1/28/10.

Lease Extension Agreement

Lease Extension Agreement, made as of March 1, 2013 Through February 2 8, 2016, between Grand Machinery Exchange Inc.(Landlord) , 1765 Expressway Drive North Hauppauge, NY 11788 and Tishcon Corp. 30 New York Ave. Westbury NY 11590 as Tenant for the premises known as 36 Sylvester St. Westbury, NY 11590 entire building and property

Whereas, the lease dated March 1, 2010 for the above premises expires February 28, 2013

Whereas, the Landlord and Tenant desire to extend said lease for an additional 3 (three) years.

The parties agree as follows:

1. The term of the lease is hereby extended for a 3 (three) year period, commencing March 1, 2013 and ending February 28, 2016.

2. The amount of rent for the period of this extension shall be:

| Period | Monthly | Annual |
|---|---|---|
| March 1, 2013 – February 28, 2014 | $9,650.00 | $115,800.00 |
| March 1, 2014 – February 28, 2015 | $10,036.00 | $120,432.00 |
| March 1, 2015 – February 28, 2016 | $10,437.00 | $125,249.00 |

3. The security shall be increased to $28,950.00. Current security held is $25,750.00.

4. Except as modified herein, all of the other terms and conditions of the Agreement of lease are to remain unchanged and shall be in full force and effect for the term as herein extended.

5. This agreement may not be changed orally and shall only be changed in writing signed by both parties.

6. This agreement shall bind and inure to the benefit of each of the parties hereto and their successors and assigns.

Grand Machinery Exchange Inc.
Landlord

By: [signature] 2/14/2013

Tishcon Corp.
Tenant

BY: [signature] Sr. V.P. 2/12/13

**New York State Department of Environmental Conservation**
**Division of Environmental Enforcement**
**Eastern Field Unit**
200 White Plains Road, 5th Floor, Tarrytown, New York 10591-5805
**Phone:** (914) 332-1835 ext. 320 • **FAX:** (914) 332-5116 (not for service of process)
**Website:** www.dec.state.ny.us

Environmental Conservation 30 YEARS
John P. Cahill
Commissioner

September 6, 2000

Paul Merandi.
Grand Machinery Exchange
215 Centre Street
New York, New York 10013

Re: FRI/FFS 36 Sylvester Street
Site # 1-30-043U

Dear Mr. Merandi:

Enclosed please find a fully executed copy of the Order on Consent for the Development and Implementation of a Focused Remedial Investigation/Focused Feasibility Study ("FRI/FFS") for the 36 Sylvester Street Site (the "Site"). The Department has approved the Work Plan proposed for the Site entitled "Focussed Remedial Investigation Final Work Plan" prepared by Impact Environmental, dated July 10, 2000.

Sincerely,

Alali M.. Tamuno
Senior Attorney

cc:
C.Vasudevan
R. Lilley, Jr.

NEW YORK STATE CENSUS 2000
BE PART OF THE COUNT
SEA PARTE DE LA CUENTA!

GMEI-00050

STATE OF NEW YORK: DEPARTMENT OF ENVIRONMENTAL CONSERVATION

| | |
|---|---|
| In the Matter of the<br>Development and Implementation<br>of a Focused Remedial Investigation/Focused Feasibility<br>Study for an Inactive Hazardous Waste<br>Disposal Site, Under Article 27, Title 13,<br>and Article 71, Title 27 of the<br>Environmental Conservation Law<br>of the State of New York by<br>by | ORDER<br>ON<br>CONSENT<br><br>INDEX # W1-0863-00-01 |
| **Grand Machinery Exchange, Inc.**<br>Respondent. | Site Code #1-30-043U |

WHEREAS,

1. The New York State Department of Environmental Conservation (the "Department") is responsible for enforcement of Article 27, Title 13 of the Environmental Conservation Law of the State of New York ("ECL"), entitled "Inactive Hazardous Waste Disposal Sites." This Order is issued pursuant to the Department's authority under, inter alia, ECL Article 27, Title 13 and ECL 3-0301.

2. Grand Machinery Exchange, Inc. ("Respondent"), is a company organized under the laws of the State of New York, and is the current owner of the site located at 36 Sylvester Street in the New Cassel Industrial Area, Westbury NY 11590, (hereinafter referred to as "the Site"). Groundwater beneath and downgradient of the site is contaminated with high levels of TCA. The contaminated groundwater is located within an EPA-designated sole-source aquifer. Two public water supply wells are located 1,500 feet downgradient of the site. A site map is attached as an appendix to this Order as Exhibit "A".

3. The Site is an inactive hazardous waste disposal site, as that term is defined at ECL 27-1301.2, and presents a significant threat to the public health or environment. The Site has been listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State as Site Number 01-30-043U. The Department has classified the Site as a Classification "2" pursuant to ECL 27-1305.4.b.

4. A. Pursuant to ECL 27-1313.3.a, whenever the Commissioner of Environmental Conservation (the "Commissioner") "finds that hazardous wastes at an inactive hazardous waste disposal site constitute a significant threat to the environment, he may order the owner of such site and/or any person responsible for the disposal of hazardous wastes at such site (i) to develop an inactive hazardous waste disposal site remedial program, subject to the approval of the department, at such site, and (ii) to implement such program within reasonable time limits specified in the order."

B. Any person under order pursuant to ECL 27-1313.3.a has a duty imposed by ECL Article 27, Title 13 to carry out the remedial program committed to under order. ECL 71-2705 provides that any person who fails to perform any duty imposed by ECL Article 27, Title 13 shall be liable for civil, administrative and/or criminal sanctions.

C. The Department also has the power, inter alia, to provide for the prevention and abatement of all water, land, and air pollution. ECL 3-0301.1.i.

5. The Department and Respondent agree that the goals of this Order are for Respondent to (i) develop and implement a Focused Remedial Investigation/Focused Feasibility Study ("FRI/FFS") for the Site; and (ii) reimburse the State's administrative costs.

6. Respondent, having waived Respondent's right to a hearing herein as provided by law, and having consented to the issuance and entry of this Order, agrees to be bound by its terms. Respondent consents to and agrees not to contest the authority or jurisdiction of the Department to issue or enforce this Order, and agrees not to contest the validity of this Order or its terms.

NOW, having considered this matter and being duly advised, IT IS ORDERED THAT:

I. Initial Submittal

Within 30 days after the effective date of this Order, Respondent shall submit to the Department all data within Respondent's possession or control regarding environmental conditions on-Site and off-Site, and other information described below, unless the Department informs Respondent that such data have previously been provided to the Department. The data and other information shall include:

A. A brief history and description of the Site, including the types, quantities, physical state, location, and dates of disposal of hazardous waste including methods of disposal and spillage of such wastes;

B. A concise summary of information held by Respondent and Respondent's attorneys and consultants with respect to all persons responsible for such disposal of hazardous wastes, including but not limited to names, addresses, dates of disposal and any proof linking each such person responsible with hazardous wastes identified pursuant to Subparagraph I.A; and

C. A comprehensive list and copies of all existing relevant reports with titles, authors, and subject matter, as well as a description of the results of all previous investigations of the Site and areas in the vicinity of the Site, including copies of all available topographic and property surveys, engineering studies and aerial photographs.

## II. Performance and Reporting of Focused Remedial Investigation

A. Within 30 days after the effective date of this Order, Respondent shall commence the Remedial Investigation in accordance with the schedule contained in the Department-approved FRI/FFS Work Plan attached to this Order as Exhibit "B" and made a part of this Order.

B. Respondent shall perform the Remedial Investigation in accordance with the Department-approved FRI/FFS Work Plan.

C. During the performance of the Focused Remedial Investigation, Respondent shall have on-Site a full-time representative who is qualified to supervise the work done.

D. Within the time frame set forth in the Department-approved FRI/FFS Work Plan, Respondent shall prepare a Focused Remedial Investigation Report that shall:

(1) include all data generated and all other information obtained during the Focused Remedial Investigation:

(2) provide all of the assessments and evaluations set forth in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA") [42 USC 9601 *et seq.*], as amended, the National Contingency Plan ("NCP") of March 8, 1990 [40 CFR Part 300], the USEPA guidance document entitled "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA," dated October 1988, and any subsequent revisions to that guidance document in effect at the time the FRI/FFS Work Plan is submitted, and appropriate USEPA and Department technical and administrative guidance documents as applicable to the approved FRI/FFS Work Plan.

(3) identify any additional data that must be collected; and

(4) include a certification by the individual or firm with primary responsibility for the day to day performance of the Remedial Investigation that all activities that comprised the Focused Remedial Investigation were performed in full accordance with the Department-approved FRI/FFS Work Plan.

## III. Focused Feasibility Study

A. In accordance with the schedule contained in the Department-approved FRI/FFS Work Plan, Respondent shall submit a complete Focused Feasibility Study evaluating on-Site and off-Site remedial actions to eliminate, to the maximum extent practicable, all health and environmental hazards and potential hazards at the Site. The Focused Feasibility Study shall be prepared by and have the signature and seal of a professional engineer who shall certify that the Focused Feasibility Study was prepared in accordance with this Order.

B. Respondent shall perform and prepare the Focused Feasibility Study in accordance with the Department-approved FRI/FFS Work Plan and in a manner consistent with CERCLA, the NCP, and the guidance documents identified in Subparagraph II.D.2.

C. After the Department's approval of the Focused Feasibility Study, Respondent shall cooperate and assist the Department in soliciting public comment on the FRI/FFS and on the proposed remedial action plan, in accordance with CERCLA, the NCP, the guidance documents identified in Subparagraph II.D.2, and with any Department policy and guidance documents in effect at the time the public comment period is initiated. After the close of the public comment period, the Department shall select a final remedial alternative for the site in a Record of Decision ("ROD"). The ROD shall be incorporated into and become an enforceable part of this Order.

IV. Interim Remedial Measures

A. 1. Respondent may propose one or more IRMs for the Site.

2. In proposing each IRM, Respondent shall submit to the Department a work plan that includes a chronological description of the anticipated IRM activities together with a schedule for performance of those activities (an "IRM Work Plan" for that Site).

3. Upon the Department's determination that the proposal is an appropriate IRM and upon the Department's approval of such work plan, the IRM Work Plan shall be incorporated into and become an enforceable part of this Order; and Respondent shall submit to the Department for its review and (as appropriate) approval, in accordance with the schedule contained in the Department-approved IRM Work Plan, detailed documents and specifications prepared, signed, and sealed by a professional engineer to implement the Department-approved IRM. Such documents shall include a health and safety plan, contingency plan, and (if the Department requires such) a citizen participation plan that incorporates appropriate activities outlined in the Department's publication, "New York State Inactive Hazardous Waste Citizen Participation Plan," dated June 1998, and any subsequent revisions thereto, and 6 NYCRR Part 375. Respondent shall then carry out such IRM in accordance with the requirements of the approved IRM Work Plan, detailed documents and specifications, and this Order. Respondent shall notify the Department of any significant difficulties that may be encountered in implementing the Department-approved work plan, detailed documents, or specifications and shall not modify any obligation unless first approved by the Department.

4. During implementation of all construction activities identified in the Department-approved IRM Work Plan, Respondent shall have on-Site a full-time representative who is qualified to supervise the work done.

5. Within the schedule contained in the Department-approved IRM Work Plan, Respondent shall submit to the Department a final engineering report prepared by a professional engineer that includes a certification by that individual that all activities

that comprised the Department-approved IRM were completed in accordance with the Department-approved IRM Work Plan and this Order.

a. If the performance of the Department-approved IRM encompassed construction activities, the final engineering report also shall include a detailed post-remedial operation and maintenance plan ("IRM O&M Plan"); "as-built" drawings and a final engineering report (each including all changes made to the Remedial Design during construction); and a certification by a professional engineer that the IRM was implemented and all construction activities were completed in accordance with the Department-approved detailed documents and specifications for the IRM and all such activities were personally witnessed by him or her or by a person under his or her direct supervision. The IRM O&M Plan, "as built" drawings, final engineering report, and certification must be prepared, signed, and sealed by a professional engineer.

b. Upon the Department's approval of the IRM O&M Plan, Respondent shall implement the IRM O&M Plan in accordance with the requirements of the Department-approved IRM O&M Plan.

6. After receipt of the final engineering report and certification, the Department shall notify Respondent in writing whether the Department is satisfied that the IRM was completed in compliance with the Department-approved IRM Work Plan and design.

V. Progress Reports

Respondent shall submit to the parties identified in Subparagraph XIII.B in the numbers specified therein copies of written monthly progress reports that:

A. describe the actions which have been taken toward achieving compliance with this Order during the previous month;

B. include all results of sampling and tests and all other data received or generated by Respondent or Respondent's contractors or agents in the previous month, including quality assurance/quality control information, whether conducted pursuant to this Order or conducted independently by Respondent;

C. identify all work plans, reports, and other deliverables required by this Order that were completed and submitted during the previous month;

D. describe all actions, including, but not limited to, data collection and implementation of work plans, that are scheduled for the next month and provide other information relating to the progress at the Site;

E. include information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule for implementation of

Respondent's obligations under the Order, and efforts made to mitigate those delays or anticipated delays;

F. include any modifications to any work plans that Respondent has proposed to the Department or that the Department has approved; and

G. describe all activities undertaken in support of the Citizen Participation Plan during the previous month and those to be undertaken in the next month. Respondent shall submit these progress reports to the Department by the tenth day of every month following the effective date of this Order.

Respondent also shall allow the Department to attend, and shall provide the Department at least seven days advance notice of, any of the following: prebid meetings, job progress meetings, substantial completion meeting and inspection, and final inspection and meeting.

VI. Review of Submittals

A. 1. The Department shall review each of the submittals Respondent makes pursuant to this Order to determine whether it was prepared, and whether the work done to generate the data and other information in the submittal was done, in accordance with this Order and generally accepted technical and scientific principles. The Department shall notify Respondent in writing of its approval or disapproval of the submittal. All Department-approved submittals shall be incorporated into and become an enforceable part of this Order.

2. a. If the Department disapproves a submittal, it shall so notify Respondent in writing and shall specify the reasons for its disapproval. Within 30 days after receiving written notice that Respondent's submittal has been disapproved, Respondent shall make a revised submittal to the Department that addresses and resolves all of the Department's stated reasons for disapproving the first submittal.

b. After receipt of the revised submittal, the Department shall notify Respondent in writing of its approval or disapproval. If the Department disapproves the revised submittal, Respondent shall be in violation of this Order and the Department may take any action or pursue whatever rights it has pursuant to any provision of statutory or common law. If the Department approves the revised submittal, it shall be incorporated into and become an enforceable part of this Order.

B. Respondent shall modify and/or amplify and expand a submittal upon the Department's direction to do so if the Department determines, as a result of reviewing data generated by an activity required under this Order or as a result of reviewing any other data or facts, that further work is necessary.

VII. Penalties

A. 1. Respondent's failure to comply with any term of this Order constitutes a violation of this Order and the ECL.

2. Respondent shall be liable for payment to the Department of the sums set forth below as stipulated penalties for each day or part thereof that Respondent is in violation of the terms of this Order. All penalties begin to accrue on the first day Respondent is in violation of the terms of this Order and continue to accrue through the final day of correction of any violation. Such sums shall be due and payable within 15 days after receipt of notification from the Department assessing the penalties. If such payment is not received within 15 days after Respondent receives such notification from the Department, interest shall be payable at the annual rate of nine per centrum on the overdue amount from the day on which it was due through, and including, date of payment. Penalties shall be paid by certified check or money order, made payable to "New York State Department of Environmental Conservation" and shall be delivered personally or by certified mail, return receipt requested, to the Director, Division of Environmental Enforcement, N.Y.S.D.E.C., 50 Wolf Road, Albany, New York 12233-5500. Payment of the penalties shall not in any way alter Respondent's obligation to complete performance under the terms of this Order. Stipulated penalties shall be due and payable under Subparagraph VII.A.2 pursuant to the following schedule:

| Period of Non-Compliance | Penalty Per Day |
|---|---|
| First through 15th day | $ 500 |
| 16th through 30th day | $ 1000 |
| 31st day and thereafter | $ 1500 |

B. Respondent shall not suffer any penalty under this Order or be subject to any proceeding or action if it cannot comply with any requirement hereof because of war, riot, or an unforeseeable disaster arising exclusively from natural causes which the exercise of ordinary human prudence could not have prevented. Respondent shall, within five days of when it obtains knowledge of any such condition, notify the Department in writing. Respondent shall include in such notice the measures taken and to be taken by Respondent to prevent or minimize any delays and shall request an appropriate extension or modification of this Order. Failure to give such notice within such five-day period constitutes a waiver of any claim that a delay is not subject to penalties. Respondent shall have the burden of proving that an event is a defense to compliance with this Order pursuant to this Subparagraph.

VIII. Entry upon Site

Respondent hereby consents to the entry upon the Site or areas in the vicinity of the Site which may be under the control of Respondent by any duly designated employee, consultant, contractor, or agent of the Department or any State agency for purposes of inspection, sampling, and testing and to ensure Respondent's compliance with this Order.

During Remedial Construction, Respondent shall provide the Department with suitable office space at the Site, including access to a telephone, and shall permit the Department full access to all records relating to matters addressed by this Order and job meetings.

IX. Payment of State Costs

Within 30 days after receipt of an itemized invoice from the Department, Respondent shall pay to the Department a sum of money which shall represent reimbursement for the State's expenses including, but not limited to, direct labor, fringe benefits, indirect costs, travel, analytical costs, and contractor costs incurred by the State of New York for work related to the Site to the effective date of this Order, as well as for reviewing and revising submittals made pursuant to this Order, overseeing activities conducted pursuant to this Order, collecting and analyzing samples, and administrative costs associated with this Order. Such payment shall be made by certified check payable to the Department of Environmental Conservation and shall be sent to:

Bureau of Program Management
Division of Environmental Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233-7010.

Personal service costs shall be documented by reports of Direct Personal Service, which shall identify the employee name, title, biweekly salary, and time spent (in hours) on the project during the billing period, as identified by an assigned time and activity code. Approved agency fringe benefit and indirect cost rates shall be applied. Non-personal service costs shall be summarized by category of expense (e.g., supplies, materials, travel, contractual) and shall be documented by expenditure reports.

X. Department Reservation of Rights

A. Nothing contained in this Order shall be construed as barring, diminishing, adjudicating, or in any way affecting any of the Department's civil, criminal, or administrative rights (including, but not limited to, nor exemplified by, the right to recover natural resource damages) or authorities.

B. Nothing contained in this Order shall be construed to prohibit the Commissioner or his duly authorized representative from exercising any summary abatement powers.

XI. Indemnification

Respondent shall indemnify and hold the Department, the State of New York, and their representatives and employees harmless for all claims, suits, actions, damages, and costs of every name and description arising out of or resulting from the fulfillment or attempted fulfillment of this Order by Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns.

XII. Public Notice

A. Within 30 days after the effective date of this Order, Respondent shall file a Declaration of Covenants and Restrictions with the Clerk of the County wherein the Site is located to give all parties who may acquire any interest in the Site notice of this Order.

B. If Respondent proposes to convey the whole or any part of Respondent's ownership interest in the Site, Respondent shall, not fewer than 60 days before the date of conveyance, notify the Department in writing of the identity of the transferee and of the nature and proposed date of the conveyance and shall notify the transferee in writing, with a copy to the Department, of the applicability of this Order.

XIII. Communications

A. All written communications required by this Order shall be transmitted by United States Postal Service, by private courier service, or hand delivered as follows:

1. Communication from Respondent shall be sent to:

Chittababu Vasudevan, P.E., Ph. D.
New York State Department of Environmental Conservation
Division of Environmental Remediation
50 Wolf Road
Albany, New York 12233-7010

with copies to:

G. Anders Carlson, Ph.D.
Director, Bureau of Environmental Exposure Investigation
New York State Department of Health
547 River Street
Flanigan Square
Troy, New York 12180-2216

Ray Cowan, Regional Director
New York State Department of Environmental Conservation
SUNY Stony Brook
Loop Road
Building 40
Stony Brook, NY 11790-2356

Alali M. Tamuno, Senior Attorney
New York State Department of Environmental Conservation
Division of Environmental Enforcement
200 White Plains Road, 5th Floor
Tarrytown, NY 10591-5805

2. Communication to be made from the Department to Respondent shall be sent to:

Paul Merandi
Grand Machinery
215 Center Street
New York, New York 10013

Jim Allen
NAC Environmental, Inc.
570 Lexington Avenue - 3rd Floor
New York, New York 10022.

B. Copies of work plans and reports shall be submitted as follows:

Four copies (one unbound) to :

Chittababu Vasudevan, P.E., Ph. D.
New York State Department of Environmental Conservation
Division of Environmental Remediation
50 Wolf Road
Albany, New York 12233-7010

Two copies to:

G. Anders Carlson, Ph.D.
New York State Department of Health
Director, Bureau of Environmental Exposure Investigation.
547 River Street
Flanigan Square
Troy, New York 12180-2216

One copy to:

Ray Cowan, Regional Director
New York State Department of Environmental Conservation
SUNY Stony Brook
Loop Road
Building 40
Stony Brook, NY 11790-2356

Alali M. Tamuno, Senior Attorney
New York State Department of Environmental Conservation
Division of Environmental Enforcement
200 White Plains Road, 5th Floor
Tarrytown, NY 10591-5805

C. 1. Within 30 days of the Department's approval of any report submitted pursuant to this Order, Respondent shall submit to Director, Division of Environmental Remediation, a computer readable magnetic media copy of the approved report in American Standard Code for Information Interchange (ASCII) format.

2. Within 30 days after the Department's approval of the FRI/FFS, Respondent shall submit one microfilm copy of the FRI/FFS to Director, Division of Environmental Remediation.

D. The Department and Respondent reserve the right to designate additional or different addressees for communication or written notice to the other.

XIV. Miscellaneous

A. 1. All activities and submittals required by this Order shall address both on-Site and off-Site contamination resulting from the disposal of hazardous wastes at the Site.

2. All activities Respondent is required to undertake under this Order are ordinary and necessary expenses for the continued operation of Respondent.

B. Respondent shall retain professional consultants, contractors, laboratories, quality assurance/quality control personnel, and third party data validators acceptable to the Department to perform the technical, engineering, and analytical obligations required by this Order. The experience, capabilities, and qualifications of the firms or individuals selected by Respondent shall be submitted to the Department within 15 days after the effective date of this Order. The Department's approval of these firms or individuals shall be obtained before the start of any activities for which Respondent and such firms or individuals will be responsible. The responsibility for the performance of the professionals retained by Respondent shall rest solely with Respondent.

C. The Department shall have the right to obtain split samples, duplicate samples, or both, of all substances and materials sampled by Respondent, and the Department also shall have the right to take its own samples. Respondent shall make available to the Department the results of all sampling and/or tests or other data generated by Respondent with respect to implementation of this Order and shall submit these results in the progress reports required by this Order.

D. Respondent shall notify the Department at least 10 working days in advance of any field activities to be conducted pursuant to this Order.

E. Respondent shall obtain all permits, easements, rights-of-way, rights-of-entry, approvals, or authorizations necessary to perform Respondent's obligations under this Order.

F. Respondent and Respondent's officers, directors, agents, servants, employees, successors, and assigns shall be bound by this Order. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall in no way alter Respondent's responsibilities under this Order. Respondent's officers, directors, employees, servants, and agents shall be obliged to comply with the relevant provisions of this Order in the performance of their designated duties on behalf of Respondent.

G. Respondent shall provide a copy of this Order to each contractor hired to perform work required by this Order and to each person representing Respondent with respect to the Site and shall condition all contracts entered into in order to carry out the obligations identified in this Order upon performance in conformity with the terms of this Order. Respondent or Respondent's contractors shall provide written notice of this Order to all subcontractors hired to perform any portion of the work required by this Order. Respondent shall nonetheless be responsible for ensuring that Respondent's contractors and subcontractors perform the work in satisfaction of the requirements of this Order.

H. All references to "professional engineer" in this Order are to an individual registered as a professional engineer in accordance with Article 145 of the New York State Education Law. If such individual is a member of a firm, that firm must be authorized to offer professional engineering services in the State of New York in accordance with Article 145 of the New York State Education Law.

I. All references to "days" in this Order are to calendar days unless otherwise specified.

J. The paragraph headings set forth in this Order are included for convenience of reference only and shall be disregarded in the construction and interpretation of any of the provisions of this Order.

K. 1. No term, condition, understanding, or agreement purporting to modify or vary any term of this Order shall be binding unless made in writing and subscribed by the party to be bound. No informal advice, guidance, suggestion, or comment by the Department regarding any report, proposal, plan, specification, schedule, or any other submittal shall be construed as relieving Respondent of Respondent's obligation to obtain such formal approvals as may be required by this Order.

2. If Respondent desires that any provision of this Order be changed, Respondent shall make timely written application, signed by Respondent, to the

Commissioner setting forth reasonable grounds for the relief sought. Copies of such written application shall be delivered or mailed to Alali M. Tamuno, Esq. and to Dr. Vasudevan.

L. The effective date of this Order is the date the Commissioner or his designee signs it.

DATED: 3/17/00

JOHN P. CAHILL, COMMISSIONER
New York State Department
of Environmental Conservation

By:

Michael J. O'Toole, Jr.

CONSENT BY RESPONDENT

Respondent hereby consents to the issuing and entering of this Order, waives Respondent's right to a hearing herein as provided by law, and agrees to be bound by this Order.

By: ____________________
GRAND MACHINERY EXCHANGE, INC.

Title: AUTHORIZED AGENT

Date: 3-8-00

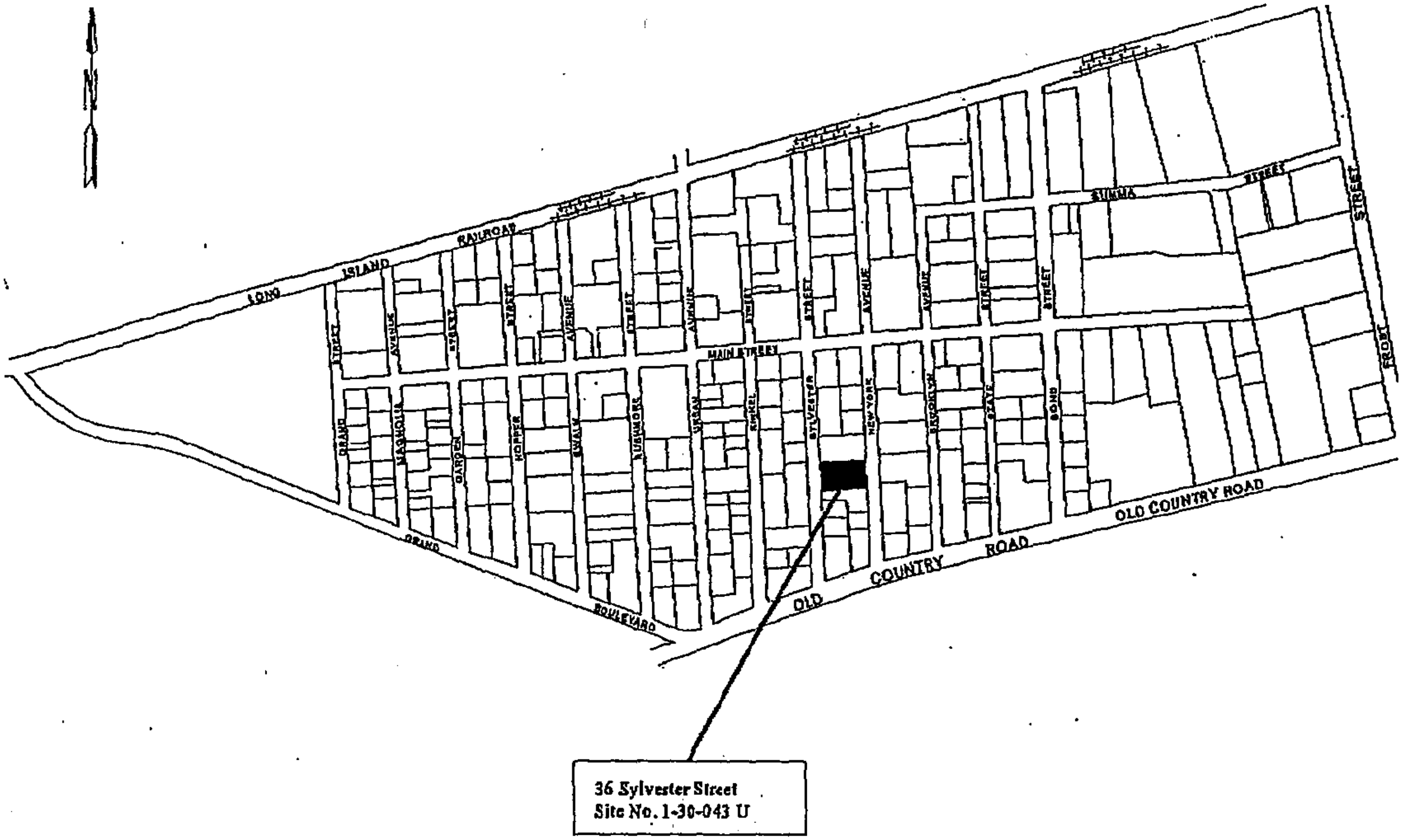
STATE OF NEW YORK )
) s.s.:
COUNTY OF NEW YORK )

On this 8 day of MARCH, 2000, before me personally appeared Paul Mercadi, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

____________________
Notary Public

JOSEPH R. CRISCIONE
NOTARY PUBLIC, State of New York
No. 01CR4661488
Qualified in Richmond County
Cert. Filed in New York County
Commission Expires Jan. 31, 2001

# EXHIBIT A




**NEW CASSEL INDUSTRIAL AREA**
**Site Location Map**
**36 Sylvester Street Site**
**Site No. 1-30-043 U**
**Westbury, Nassau County**

STATE OF NEW YORK: DEPARTMENT OF ENVIRONMENTAL CONSERVATION

| | |
|---|---|
| In the Matter of the<br>Development and Implementation<br>of a Focused Remedial Investigation/Focused Feasibility<br>Study for an Inactive Hazardous Waste<br>Disposal Site, Under Article 27, Title 13,<br>and Article 71, Title 27 of the<br>Environmental Conservation Law<br>of the State of New York by<br>by<br>**Grand Machinery Exchange, Inc,**<br>Respondent. | ORDER<br>ON<br>CONSENT<br><br>INDEX # W1-0863-00-01<br><br><br><br><br>Site Code #1-30-043U |

GMEI-00067

# Focussed Remedial Investigation

Draft Work Plan
*May 1, 2000*

# 00-096

*Proposed for:*

**Site Code # 1-30-043U**
**36 Sylvester Street**
**Westbury, New York**

*Client:*

**Grand Machinery Exchange, Inc.**
**215 Centre Street**
**New York, New York**

*User:*

**New York State Department of Environmental Conservation**
**Bureau of Eastern Remedial Action**
**Division of Environmental Remediation**
**50 Wolf Road**
**Albany, New York**

# TABLE OF CONTENTS

## Plates:

| | |
|---|---|
| **Plate 1:** | Site Location Map, Westbury, New York |
| **Plate 2:** | Site Map, Westbury, New York |
| **Plate 3:** | Sample Acquisition Plan, Westbury, New York |

## Diagrams:

| | |
|---|---|
| **Diagram 1:** | Geoprobe Operating System |

## Tables:

| | |
|---|---|
| **Table 1:** | Target Analyte List (Soil) |
| **Table 2:** | Target Analyte List (Groundwater) |
| **Table 3:** | FRI Performance Schedule |

## Appendices:

| | |
|---|---|
| **Appendix A:** | Geoprobe System Information |
| **Appendix B:** | Well Construction Diagrams |
| **Appendix C:** | Well Log Sheet |
| **Appendix D:** | Chemtech, Inc. Statement of Qualifications |
| **Appendix E:** | Qualifications of Key Personnel |

DISTRIBUTION LIST

| *Report Holder* | *Number of Reports Issued* |
|---|---|
| NYSDEC, Division of Environmental Remediation | 2 |
| Grand Machinery Exchange, Inc. | 1 |
| Impact Environmental Consulting, Inc. Corporate Records | 1 |

# 1. Introduction

This work plan details the various tasks that will be performed in the investigation of the property located at 36 Sylvester Street, Westbury, New York, herein identified as the "Site". In 1997, a Multi-site Preliminary Site Assessment (PSA) Task 4 Report prepared by Lawler, Matusky and Skelly Engineers (LMS) for the New York State Department of Environmental Conservation (NYSDEC) suggested that individual properties within the New Cassel Industrial Area (NCIA) contained the pollution sources responsible for the detected regional groundwater contamination. In recognition of this, the NYSDEC eliminated a regional listing approach that was used for the NCIA and adopted a strategy of locating individual properties within the NCIA for listing as Inactive Hazardous Waste Disposal Sites (IHWDSs). Based upon an interpretation of the data obtained by LMS, the NYSDEC determined that the Site was one of such properties.

Grand Machinery Exchange, Inc. is the current owner of the Site. The previous PSA indicated that groundwater beneath and down-gradient of the Site is contaminated with 1,1,1-Trichloroethane (TCA). As such, the Site has been designated by the NYSDEC as an IHWDS, as defined in ECL 27-1301.2. The site has been listed in the State Registry as Site Number 01-30-043U.

This Focused Remedial Investigation (FRI) will delineate the nature and extent of on-site contamination and the results will be submitted in a Focused Remedial Investigation Report in accordance with the provisions of the Draft Order on Consent between the NYSDEC and Grand Machinery Exchange, Inc. If necessary, a Focused Feasibility Study evaluating remedial action alternatives will later be submitted to the Department pursuant to the terms of the Order on Consent.

The Site is bordered by Sylvester Street to the west, New York Avenue to the east, and is situated between Main Street to the north and Old Country Road to the south. The Site was initially developed circa 1952 with a one-story, masonry building used for light industrial applications. The building was subsequently improved with an addition and various interior alterations. Presently, the Site is operated by Gel-Tec, a division of Tishcon Corp. The interior of the building is primarily utilized as warehouse space for Gel-Tec. The footprint of the building covers the majority of the property, with the exception of alleys on the north and south portions of the Site. The building is serviced with a natural gas fired heating system and was connected to the municipal sewer system circa 1987.

# 2. Proposed Site Background Study

## 2.1 Site Location and Topography

The Site is located at 36 Sylvester Street, Westbury, New York. This location is bordered by Sylvester Street to the west, New York Avenue to the east, and is situated between Main Street to the north and Old Country Road to the south. Refer to **Plate 1:** Site Location Map, *Westbury, New York.* The areal extent of the Site is approximately 20,000 square feet. The Site contains one single-story, masonry building with an approximate combined footprint of 12,125 square feet. The surface area of the Site consists of asphalt parking areas, and concrete walkways. The Site exhibits low topographic relief (one to three percent slopes). Refer to **Plate 2:** Site Map, Westbury, New York.

## 2.2 Site Background Study

A 50-year site background study will be conducted that will include information on past land uses on and immediately off-site. Historic information will be compiled from various private and public sources including the Cole reverse telephone directories, Sanborn fire insurance maps, E. Belcher Hyde maps, LILCO (LIPA) records, Town of North Hempstead Building Department records and aerial photographs. Information regarding past and current chemical use, chemical storage, spills, and previous environmental investigations will also be obtained from the Nassau County Department of Health, the NYSDEC (Region 1 Office – Stony Brook), and other related agencies.

## 2.3 Site Geology

A thorough discussion of site geology, including descriptions of surficial geology, unconsolidated deposits and the underlying bedrock will be presented. This data will be compiled from boring logs installed on-site and from reliable data sources, such as the U.S. Geological Survey (USGS).

## 2.4 Site Geohydrology

The geohydrology of the Site will be examined using available groundwater potentiometric surface maps provided by the USGS and data obtained from the results of the subsurface investigative activities proposed in this document. The investigation data will be used to compile a site-specific potentiometric map of the water table, determine groundwater transport rates and understand the dynamics of on-site contaminant migration. Additionally, the physical characteristics of the underlying aquifers will be identified. Such characteristics will include the aquifer's transmissivity, porosity and hydraulic conductivity.

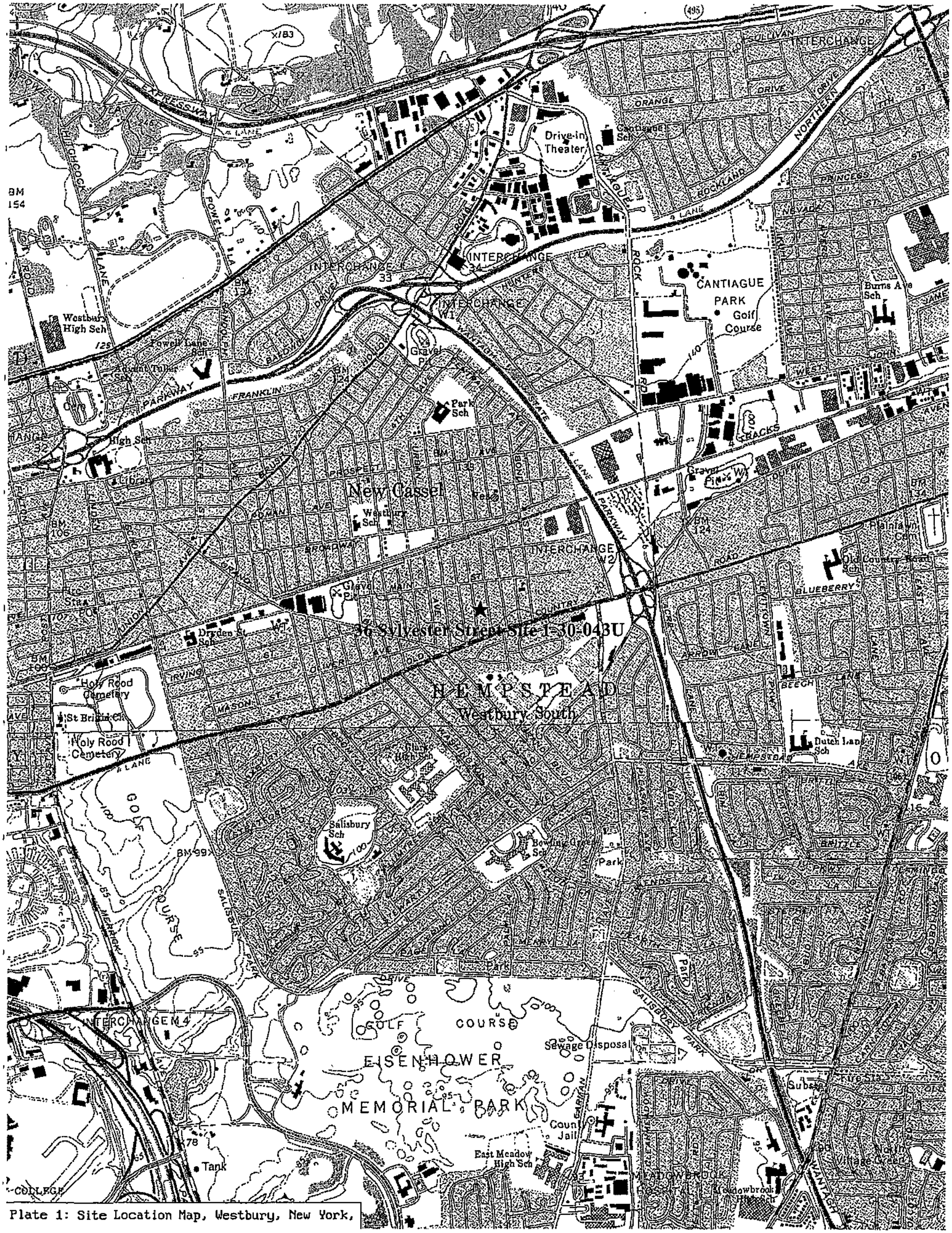


Plate 1: Site Location Map, Westbury, New York,

## 3. Site Inspection Activities

### 3.1 Site Visit

A Site inspection will be performed under the auspices of the NYSDEC. The inspection will identify the location of on-site buildings, parking lots, drains, underground injection wells, and other potential sources of point and non-point contamination.

### 3.2 Remote Sensing Survey

A remote sensing survey plan will be designed to identify any routes or mechanisms for the migration of contaminants released at the Site. Potential routes and mechanisms include underground storage tanks (USTs), underground injection wells (UIWs), sub-grade storage vaults and buried portable storage containers (drums). The survey will be performed with a ground penetrating radar (GPR) unit to locate the presence of any of these potential pollution sources that may exist on the Site.

The data collected during the survey will be reviewed by the operator and compared against past experience, technical judgment, and prior Site knowledge to classify anomalies. When a relevant structure is identified, the location will be marked using a small flag or marking paint and plotted onto a Site Plan.

The remote sensing survey may also incorporate the use of a remote camera transmitter snake and/or dye tablets to track any piping associated with any existing or former interior drainage features. If necessary, the survey may include a destructive investigation to identify the outfall location or migration paths of any potential pollution sources.

### 3.3 Locating and Mapping Subsurface Structures

Subsurface structures will be surveyed on the surface of the Site using various color marking paints and mapped on Site maps.

### 3.4 Evaluation of Emergency Procedures

The routes of emergency egress will be evaluated and marked with flagging, traffic cones or marking paint, if necessary. This will be done to ensure that equipment or on-site vehicles cannot temporarily block routes of emergency egress from all boring locations. Additionally, the site safety plan will be reviewed on-site by all workers to insure compliance.

# 4. Investigation of Soil and Groundwater Quality

## 4.1 Proposed Investigation of Point and Non-Point Sources

The information obtained from the Site inspection activities will be used to determine the locations that hazardous substances, if any, were released to specific (point sources) or non-specific (non-point sources) surface or subsurface areas of the Site.

### *4.1.1 Point Pollution Sources*

Typical point sources of pollution include underground injection wells, underground storage tanks, and recognizable surface discharges. Soil probes will be installed within the confines of any underground injection wells (storm water drywells, leaching lagoons, wastewater disposal wells, retention pits or cesspools) identified on the Site. Samples will be secured and field screened from the probes on a 15-foot vertical interval to 45-ft BEG. Analysis of the 15-ft sample interval (presumed invert of injection wells) will be performed utilizing USEPA Test Method 8260 for target volatile organic analytes, USEPA Test Method 8270 for target base-neutral semi-volatile organic analytes and USEPA Test Method 6010 for priority pollutant inorganic analytes. **Table 1:** Target Analyte List (Soil). Analysis of the 30-ft and 45-ft sample interval will be performed utilizing USEPA Test Method 8260 for target volatile organic analytes. Refer to **Table 1:** Target Analyte List (Soil).

A minimum of three (3) soil probes will be installed surrounding any underground storage tanks identified on the Site. Samples will be secured and field screened from the probes on a 15-foot vertical interval to 45-ft BEG. Analysis of each sample interval will be performed utilizing USEPA Test Method 8260 for target volatile organic analytes.

A minimum of one (1) soil probe will be installed in any surface discharge area identified on the Site. Samples will be secured and field screened from the probes on a 15-foot vertical interval to 45-ft BEG. Analysis of each sample interval will be performed utilizing USEPA Test Method 8260 for target volatile organic analytes, USEPA Test Method 8270 for target base-neutral semi-volatile organic analytes and USEPA Test Method 6010 for priority pollutant inorganic analytes.

### *4.1.2 Non-Point Pollution Sources*

Non-point pollution sources are those that impact a large area in a heterogeneous manner due to source variation. Such sources are difficult to detect from site inspection activities, therefore, the investigative approach to determine their impact on Site quality is intuitive. To detect such sources, groundwater quality entering and exiting the Site is

**Table 1: Sampling Analysis in Soil**
36 Sylvester Street Site No. 1-30-043U

### USEPA Test Method 8260
Target Volatile Organic Analytes

| | | | |
|---|---|---|---|
| Dichlorodifluromethane | Tetrachloroethene | Bromodichloromethane | 4-Isopropyltoluene |
| 1,1,1-Trichloroethane | 1,1,1,2-Tetrachloroethane | Bromomethane | Bromobenzene |
| 1,1,2-Trichloroethane | 1,1,2,2-Tetrachloroethane | Carbon Disulfide | Bromoform |
| 1,1-Dichloroethane | 1,2,3-Trichlorobenzene | Carbon Tetrachloride | Chlorobenzene |
| 1,1-Dichloroethene | 1,2,3-Trichloropropane | Chloroethane | Dibromochloromethane |
| 1,1-Dichloropropene | 1,2,4-Trichlorobenzene | Chloroform | Ethylbenzene |
| 1,2-Dichloroethane | 1,2,4-Trimethylbenzene | Chloromethane | Hexachlorobutadiene |
| 1,2-Dichloropropane | 1,2-Dibromo-3-chloropropane | cis-1,2-Dichloroethene | Isopropylbenzene |
| 2,2-Dichloropropane | 1,2-Dibromoethane | cis-1,3-Dichloropropene | m+p-Xylenes |
| 2-Butanone | 1,2-Dichlorobenzene | Dibromoethane | Napthanlene |
| 2-Chloroethyl Vinyl Ether | 1,3,5-Trimethylbenzene | Methylene Chloride | n-Butylbenzene |
| 4-Methyl-2-Pentanone | 1,3-Dichlorobenzene | Toluene | n-Propylbenzene |
| Acetone | 1,3-Dichloropropane | Trans-1,2-Dichloroethene | o-Xylene |
| Acrolein | 1,4-Dichlorobenzene | trans-1,3-Dichloropropene | sec-Butylbenzene |
| Acrylonitrile | 2-Chlorotoluene | Trichloroethene | Styrene |
| Benzene | 2-Hexanone | Trichlorofluoromethane | tert-Butylbenzene |
| Bromochloromethane | 4-Chlorotoluene | Vinyl Acetate | Vinyl Chloride |

### USEPA Test Method 8270BN
Target Semi-Volatile Organic Analytes

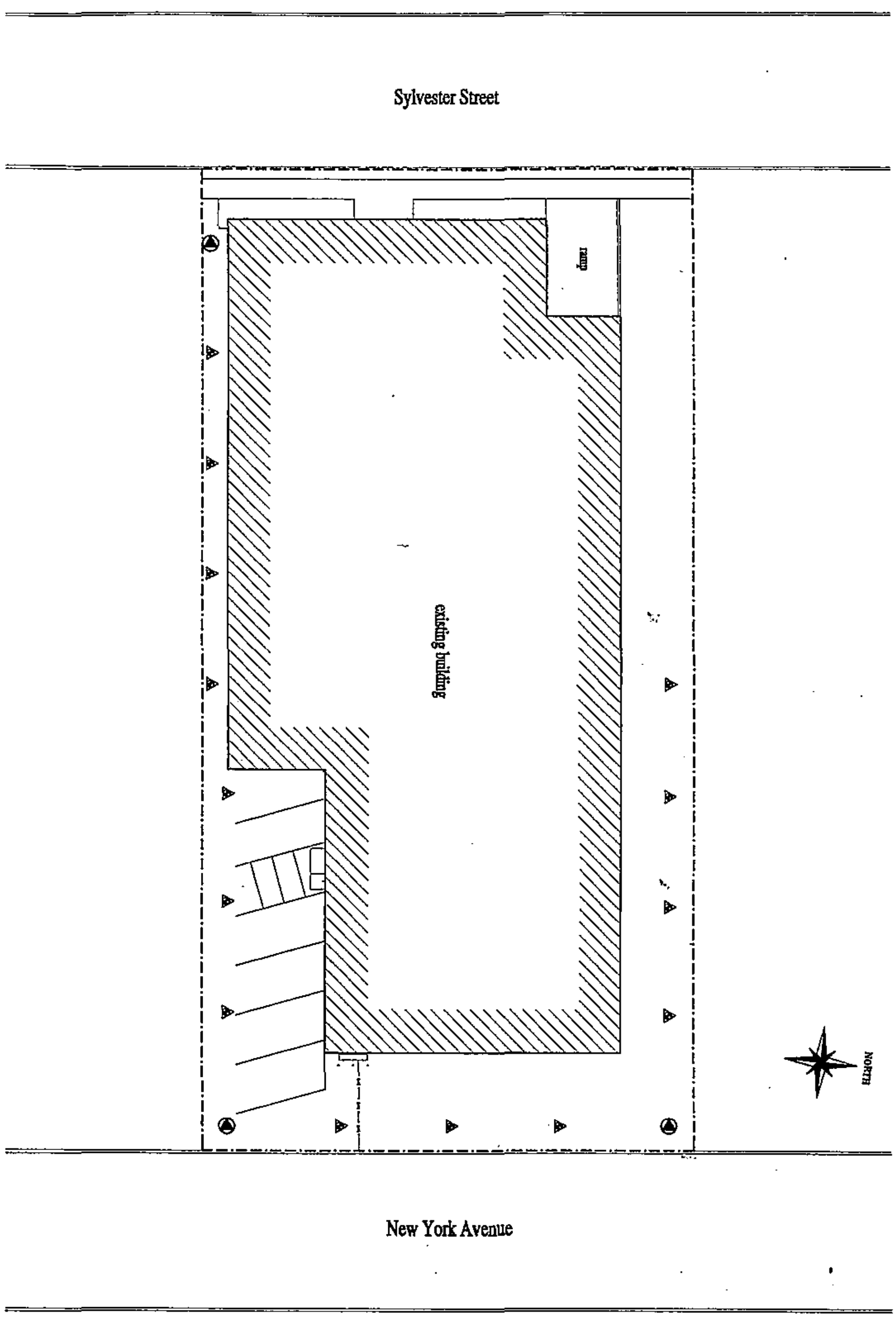
| | | | |
|---|---|---|---|
| 1,2,4-Trichlorobenzene | Acenapthene | Bis(2-Ethylhexyl)Phthalate | Hexachloroethane |
| 1,2-Dichlorobenzene | Naphthalene | Butylbenzylphthalate | Hexaclorocyclopentadiene |
| 1,3-Dichlorobenzene | Fluorene | o-Cresol | Isophorone |
| 1,4-Dichlorobenzene | 1,2-Diphenylhydrazine | Phenanthrene | Nitrobenzene |
| 2,4-Dinitrotoluene | 3,3-Dichlorobenzidine | Pyrene | N-Nitroso-di-n-Propylamine |
| 2,6-Dinitrotoluene | 4-Bromophenyl-phenylether | Carbazole | Chrysene |
| 2-Chloronapthalene | 4-Nitroaniline | Bis(2-Chloroethoxy)methane | Dibenzo-a,h-Anthracene |
| 2-Methylnaphthalene | Anthracene | Bis(2-Chloroethyl)ether | Di-n-Butylphthalate |
| 2-Nitroaniline | Benzo-a-Anthracene | Bis(2-Chloroisopropyl)ether | Di-n-Octylphthalate |
| 3-Nitroaniline | Benzo-a-Pyrene | Dibenzofuran | Fluoranthene |
| 4-Chloroaniline | Benzo-b-Fluoroanthene | Diethylphtalate | Hexaclorobenzene |
| 4-Chlorophenyl ether | Benzo-g,h,i-Perylene | Dimethylphtalate | Indeno(1,2,3-c,d)Pyrene |
| Acenaphthene | Benzo-k-Fluoroanthene | Hexachlorobutadiene | m.p-Cresol |
| | | | N-Nitrosodiphenylamine |

### USEPA Test Method 6010
Target RCRA Inorganic Analytes

| | | | |
|---|---|---|---|
| Alumimium | Calcium | Magnesium | Silver |
| Antimony | Chromium | Manganese | Sodium |
| Arsenic | Cobalt | Mercury | Thallium |
| Barium | Copper | Nickel | Vanadium |
| Beryllium | Iron | Potassium | Zinc |
| Cadmium | Lead | Selenium | |

gauges using a non-biased sampling plan (grid pattern). As part of the sampling plan, seventeen (17) groundwater sample locations will be sited on the Site. Three (3) of the seventeen groundwater samples will be acquired from permanent groundwater monitoring wells. The additional fourteen (14) groundwater sample locations will be acquired from temporary groundwater monitoring wells. These well points will be installed to compare up-gradient and down-gradient groundwater quality in conjunction with previously obtained data from the Site.

One (1) water sample obtained at the water table surface will be secured from each permanent groundwater monitoring well. Three (3) water samples obtained at three separate depths will be secured from each temporary groundwater monitoring well. The sampling depth intervals will range from the water table (actual depth will be based on measurements obtained from groundwater monitoring wells) to sixty-five (65), sixty-five (65) to eighty-five (85) and eighty-five (85) to one-hundred (100) feet BEG. The multiple depth sampling is proposed to emulate historical groundwater quality data. Analysis of these samples (permanent and temporary wells) will be performed using USEPA test method 624 (modified to include target analytes and tentatively identified compounds (TICs) for volatile organic analytes). Additionally, the laboratory will perform the calibration on the samples every 12 hours. Refer to **Table 2:** Target Analyte List (Groundwater). All proposed locations can be referenced with **Plate #3:** Sample Acquisition Plan, Westbury, New York.




IMPACT ENVIRONMENTAL
*a division of Impact Environmental Consulting Inc.*
1 Village Plaza
Kings Park, New York 11754

# 00-096

Plate 3: Sample Acquisition Plan
*Westbury, New York*

Legend:
- groundwater probe node
- soil probe node
- monitoring well

scale: 1" = 20'

**Table 2: Sampling Analysis in Groundwater**
36 Sylvester Street Site No. 1-30-043U

**USEPA Test Method 624**
Target Volatile Organic Analytes
(This method will be modified to include Tentatively Identified Compounds)

| | |
|---|---|
| 1,1,1-Trichloroethane | Carbon Tetrachloride |
| 1,1,2,2-Tetrachloroethane | Chlorobenzene |
| 1,1,2-Trichloroethane | Chloroethane |
| 1,1-Dichloroethane | Chloroform |
| 1,1-Dichloroethene | Chloromethane |
| 1,2-Dichlorobenzene | cis-1,3-Dichloropropene |
| 1,2-Dichloroethane | Ethylbenzene |
| cis-1,2-Dichloroethene | m+p Xylenes |
| 1,2-Dichloropropane | Methylene Chloride |
| 1,3-Dichlorobenzene | o-Xylene |
| 1,4-Dichlorobenzene | Tetrachloroethene |
| 2-Chloroethyl Vinyl Ether | Toluene |
| Benzene | Trans-1,2-Dichloroethene |
| Bromochloromethane | trans-1,3-Dichloropropene |
| Bromodichloromethane | Trichloroethene |
| Bromoform | Trichlorofluoromethane |
| Bromomethane | Vinyl Chloride |

## 5. Investigative Procedures

### 5.1 GPR Survey

A qualified Impact Environmental Consulting, Inc. technician will specify a coordinate system on the plainmetric surface of the site to map any subsurface dielectric anomalies detected on the premises. The operator uses knowledge of the subsurface soil composition to calibrate the SIR-2 system to site specific conditions. Factor settings such as range, gain, number of gain points, and scans per unit will be modified to yield the most accurate data to describe the subsurface conditions.

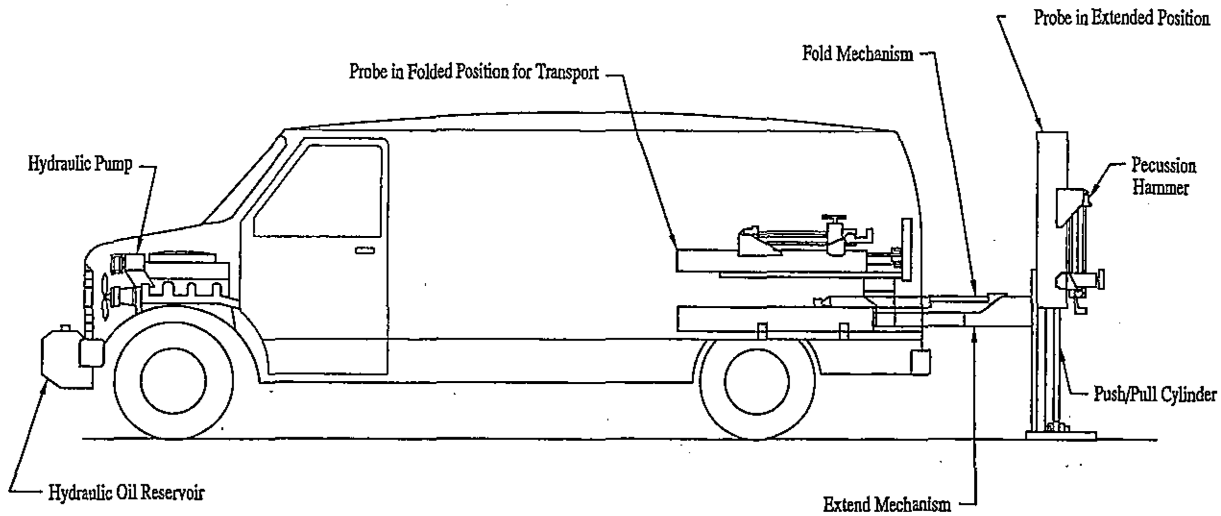
Upon finding a dielectric anomaly, a more spatially specific coordinate system will be designed over the area to determine its size, shape, and orientation.

### 5.2 Subsurface Probe Installation

Subsurface probes will be installed using a *Geoprobe* hydraulically powered probing tool (see **Diagram 1**: Geoprobe Operating System). Mechanized, vehicle mounted probe systems apply both static force and hydraulically powered percussion hammers for tool placement (static down forces up to 3,000 pounds combined with percussion hammers of eight horsepower continuous output). Recovery of large sample volumes will be facilitated with a probe-driven sampler. The probe-driven sampler consists of a hollow probe, which opens via a remote control mechanism at the selected sampling depth in the soil profile to allow soil to enter as it was advanced. Discrete media samples will be secured at the desired depths and contained within a non-reactive transparent plastic sleeve that lined the hollow probe. The plastic sleeves will be removed for subsequent inspection and sample aliquot acquisition.

### 5.3 Sample Characterization

A visual inspection of all samples recovered during the installation of each of the soil probes will be conducted to identify any gross signs of chemical contamination and to classify the sample media. Color classifications will be made in accordance with the Munsell Classification System. Gradation classifications will be made in accordance with the Unified Soil Classification System. In addition, samples will be screened for contamination using a photo ionization detector.



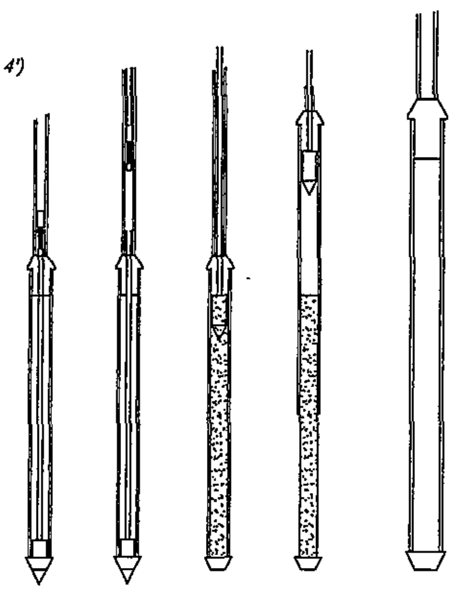

**Basics**

- Hydraulic powered probe unit isoperated from a engine driven pump.
- Remote vehicle ignition allows operator to start engine from probe unit.
- Belt driven hydraulic pump supplies 10 gpm @ 2000 rpm, 3000 psi operating pressure
- Probe unit folds for transport
- Unit utilizes static weight of vehicle and pecussion hammer to advance probing tools.
- Hydraulic hammer delivers pecussion rate of 30 Hz.
- Probes have greater than 18,000 lbs of down force and 25,000 lbs of retraction force.
- Drives multiple diameter probes (1", 1.25" and 2.25") to depths over 100 feet.

Soil Probing Tool

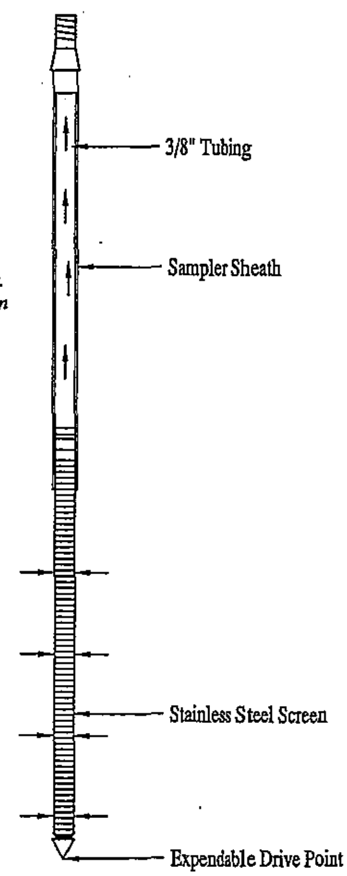
*The tools are advanced and a sample is acquired in a non-reactive plastic sheathing. The system offers two sizes of sample retrieval:*

*Large bore - 1.5" x 2'*
*Macro - 2.25" x (2', 3' & 4')*



Groundwater SP-15 Sampler

*The tool allows a stainless steel, 4' screen to be delivered to the underlying groundwater. At the desired depth, the screen is retracted and samples are obtained via a check valve assembly.*




IMPACT ENVIRONMENTAL
a division of impact environmental consulting, inc.
1 Village Plaza
Kings Park, New York 11754
631.269.8800 telephone
631.269.1599 facsimile

Diagram 1: Geoprobe Operating System

Legend:
groundwater probe node
soil probe node

## 5.4 Field Screening

Headspace analysis will be performed on each of the acquired samples utilizing a portable photo ionization detection meter to measure what, if any, hydrocarbon concentrations were present in isolated portions of the secured samples. Headspace analysis will be conducted by partially filling a wide-mouth glass container with sample aliquot and sealing the top with aluminum foil, thereby creating a void. This void is referred to as the sample headspace.

To facilitate the detection of any hydrocarbons contained within the headspace, the container will be agitated for a period of thirty (30) seconds. The probe of the vapor analyzer will then be injected through the foil into the headspace to measure the hydrocarbon concentrations present. A Photovac Micro-Tip, photo ionization detection meter (PID) will be the organic vapor analyzer selected for the headspace analysis. A PID utilizes the principle of photo ionization for detection and measurement of hydrocarbon compounds. A PID does not respond to all compounds similarly; rather, each compound has its own response factor relative to its calibration. For this investigation, the PID will be calibrated to isobutylene. Hydrocarbon relative response factors for a PID calibrated to isobutylene are published by the manufacturer.

## 5.5 Temporary Well Point Sampling

The groundwater sampling system that will be used is the Screen Point 15 that is designed to accurately collect grab samples of groundwater. The Screen Point 15 uses a screen with a standard slot size of 0.004 inches that is sealed inside a 1.5-inch ID alloy steel sheath as it is driven to depth. The screen is sealed inside the sheath with Neoprene O-rings, which prevents infiltration of formation fluids until the desired depth is attained. When the screen has been driven to the depth of interest in the formation, extension rods are used to hold the screen in position as the driving rods are retracted approximately 4 feet. The 4-foot long sampler sheath forms a seal above the screen as it is retracted. A total of 41.5 inches of slotted screen is placed into contact with the formation. The Screen Point 15 groundwater sampler has a total boring diameter of 1.5 inches and the outside diameter of the screen is 1.0 inch. This provides for a maximum of 0.25 inches between the screen and the natural formation as the sampler sheath is retracted. These conditions approach the ideal for natural formation development that can be conducted when lower turbidity samples are required.

Each groundwater sample will be collected from the sampler utilizing 3/8-inch in diameter disposable tubing equipped with a bottom check valve. The tubing is extended from the surface down to the sampler. The tubing is oscillated in a controlled manner to avoid excessive turbulence that would result in a loss of volatile analytes from the sample. The collection continues until the check valve has trapped an adequate volume of a groundwater sample. The tubing is then removed and the water is poured into appropriate sample vessels for subsequent laboratory analysis.

## 5.6 Groundwater Monitoring Well Installation

The new wells will be constructed using a five and one-half inch diameter hollow stem auger. The auger annulus will allow the installation of a four-inch monitoring well casing and wire wrapped screen section. The screen slot size will be a function of the gradation of the filter pack (able to hold back at 95% of the filter pack). A filter pack will be installed within the annular space of the auger. The filter pack will extend to a depth of six inches below the bottom of the well screen to a point one-foot above the water table. The material used for the filter pack will consist of clean siliceous sand. The grain size of the filter pack sand will be three to five times the average (50% passing) size of the formation material as determined from sieve analysis. This will minimize the amount of the material entering the well from the screened part of the formation and, at the same time, not inhibit water inflow into the well. A Bentonite seal will be placed above the filter pack using a tremie pipe to form a seal at least three feet thick. A finer grained siliceous sand pack will be utilized the for remainder of the well to a point approximately two feet below the manhole cover.

Each of the wells will be constructed of four-inch schedule PVC riser, screened at a discrete interval in the saturated soil column. Groundwater at the site occurs under unconfined conditions at approximately 55 feet below grade. The screen casing of the proposed deep wells will be installed at depths ranging from 10 feet below to 10 feet above the groundwater interface. The screened length of each of the wells will be twenty-feet (the bottom twenty-feet). The wells will be constructed of PVC, as it possesses the required tensile strength (risers and threading) to accommodate the required installation depths. Additionally, PVC is resistant and non-reactive with contaminants typically found in landfill plumes and thus will be appropriate material for long term performance without contributing or removing contaminants from the groundwater. The PVC riser and screens will be interconnected with standard flush threaded couplings (ASTM F-480) containing fluorocarbon (Viton) O-rings. A filter pack will be installed around the outside of each well using a tremie pipe. The material used for the filter pack will consist of uniform clean siliceous sand. The PVC screens will be wire wrapped.

A bentonite seal will be placed above the filter pack using a tremie pipe to form a seal at least three feet thick. Above the seal, a one-foot fine-grained siliceous sand pack will be placed to minimize grout infiltration. The balance of the casing annulus will be filled with grout to the surface. The grout will consist of a commercially available high-solids cement/bentonite grout. The grout mixture will set up without being diluted by formation of water, and will displace water in the annular space to ensure a continuous seal. The grout will be placed under pressure using a tremie pipe.

An eight-inch steel casing (manway) will be placed over the four-inch diameter protective screened casing and secured in a surface well seal to adequately protect it. A drain hole will be drilled at the base of the steel casing. A vent hole will be located near the top of the steel casing to prevent explosive gas build up and to allow well water levels to respond naturally to changes in barometric pressure. The annulus of the casing will be filled with gravel. A twelve-inch weather sealed locking cap will have at least two inches of clearance between the top of each clustered well cap and the bottom of the locking cap. If necessary, duplicate keys to the locking cap will be submitted to the NYSDEC.

A concrete surface seal will be constructed. The surface seal will extend below the frost line. The top of the seal will be constructed by pouring concrete into a form with a minimum three-foot side. The seal will prevent surface runoff from ponding and entering the well casing. In areas of excessive vehicle traffic, protective bollards will be installed around the seal. Complete construction diagrams for the proposed wells are provided in **Appendix C**.

### *5.6.1 Groundwater Monitoring Well Development and Sampling Procedure*

The development and sampling procedures will conform to NYSDEC protocol. A field log protocol will be conducted to record sampling data including; date, time, location, sample identification code, depth to water, total depth of the well, method of well development, and sampling technique.

The monitoring wells will be developed by purging a minimum of three (3) static well volumes utilizing a disposable bailer. A static well volume is defined as:

$$\textit{Static well volume} = \textit{height of water column} \times (\textit{well radius})^2 \times \pi \times 7.48$$

where 7.48 is the conversion factor for cubic feet to gallons

Groundwater samples will be acquired from each monitoring well utilizing a dedicated Voss disposable bailer to prevent cross-contamination. All of the samples will be transferred with minimal disturbance into the appropriate vessels, preserved at 4°C in a cooler and transported under proper chain-of-custody procedures laboratory for analysis.

## 6. Record Keeping and Documentation

A Site field log and a master sample log will be used on-site to record notes pertaining to the sampling. For the groundwater wells, a well log sheet will be used to record information. A sample form is provided in Appendix D.

Chemtech Laboratories, Inc. will be used for all laboratory work in this study. A statement of qualifications for Chemtech can be found in Appendix E.

### 6.1 Sample Tracking System

In order to provide for proper identification in the field, and proper tracking in the laboratory, all samples must be labeled clear and in a consistent fashion using the procedures and protocols described below and with the following subsections.

Sample labels will be waterproof and have a pre-assigned, unique number that is indelible.
Field personnel must maintain a field notebook. This notebook must be water resistant with sequentially numbered pages. Field activities shall be sequentially recorded at a later time. The notebook, along with the chain of custody form, must contain sufficient information to allow reconstruction of the sample collection and handling procedure at a later time. Each sample shall have a corresponding notebook entry that includes:

- Sample ID number
- Well location and number
- Date and time
- Analysis for which sample was collected
- Additional comments as necessary
- Sampler's name

Each sample must have a corresponding notebook entry on a chain-of-custody form. The manifest entry for sampling at any one well is to be completed before sampling is initiated by the same sampling team at any other well. In cases where the samples leave the immediate control of the sampling team, the samples must be sealed.

### 6.2 Sample Identification System

Each sample collected shall be designated by an alphanumeric code that shall identify the type of sampling location, the specific location, the matrix sampled, and a specific sample designation. Site specific procedures are described below.

Sample identifications shall contain a sequential code consisting of three segments. The first segment shall designate the project number. The second segment shall identify the location type. Location types shall be identified by a two-letter code. For example, MW will be used for monitoring well and GP for geoprobe. The third segment shall identify the specific sample location. The specific sampling location shall be identified using a three-digit number.

The fourth segment shall identify the matrix type and sample designation or identifier that identifies the sample depth, the sample event number, or other designation depending on the sample type. The matrix type shall be designated by a two-letter code. For example: GW will be used for groundwater. The sample identifier shall be represented by a two digit numeric code. Sampling events or rounds, such as for groundwater sampling shall be numbered in sequence beginning with "01" that corresponds to the round of sampling.

The following shall be a general guide for sample identification:

| First Segment | Second Segment | Third Segment | Fourth Segment |
|---|---|---|---|
| NNN | AA | NNN | AANN |
| Project # | Location Type | Specific Type | Matrix Sample Identifier |
| | | | |
| 963 | MW | 281 | GW01 |

Symbol Definitions:
A = Alphabetic
N = Numeric

Location Type:
MW = Monitoring Well
GP = Geoprobe

Matrix Type:
S = Soil
GW = Groundwater

Sample Identifier:
1st round of sampling = 01
2nd round of sampling = 02

## 6.3 Sample Containers and Analytical Requirements

As required in the NYSDEC Analytical Sampling Protocol (ASP), the laboratory must provide all sample containers. If glass bottles are used, extra glass bottles will be obtained from the laboratory to allow for accidental breakage that may occur. Necessary preservatives will be placed in the sample bottles by the laboratory. The sample bottles will be handled carefully so that preservatives and glassware are not inadvertently spilled. All soil samples will be put into 4-ounce glass jars with Teflon liners. All liquid samples will be put into 40-ml glass vials with Teflon liners.

## 6.4 Sample Packaging

Samples shall be packaged and shipped according to Section 6.2 of the USEPA's *Compendium of Superfund Field Operations Methods* entitled, "Packaging, Labeling, and Shipping." Chain of custody forms, sample labels, custody seals, and other sample documents shall be filled out as specified in the USEPA *CLP Users Guide*. Sample bottles and samples shall either be delivered/picked up at the site daily by Chemtech Laboratories, or delivered via overnight courier.

The proper procedures for packaging and shipping must be followed once the samples have been collected.

Packaging

Prior to shipment, samples must be packaged in accordance with current US DOT regulations. All required government and commercial carrier shipping papers must be filled out. The procedure below should be followed regardless of transport method.

As required in the NYSDEC ASP, samples will be transported in metal ice chests or sturdy plastic coolers.

Remove previously used labels, tape, and postage from cooler.

Ship filled sample bottles in same cooler in which empty bottles were received.

Check that all bottle labels are complete.

Check that all sample bottles are tightly capped.

Affix return address labels.

Be sure that chain-of-custody forms are complete.

Wrap sample bottles in bubble pack and place in cooler.

Pack bottles with extra bubble pack, vermiculite, or Styrofoam.

Keep samples refrigerated in cooler with bagged ice or frozen cold packs. Do not use ice for packing material.

Separate and retain the sampler's copy of chain-of-custody.

Tape paperwork in zipper bag to inside of cooler lid.

Close cooler and apply signed and dated custody seal in such a way that the seal must be broken to open the cooler.

Securely close cooler lid with packing or duct tape. Be sure to tape latches and drain plugs in closed position.

Shipping

Samples should arrive at the lab as soon as possible following sample collection to ensure holding times are not exceeded. All samples must be hand delivered on the same day as sampling or sent via overnight courier. Coolers will contain ice packs to maintain a temperature below 4 °F. Samples will be delivered to the laboratory within the seven-day holding period prescribed for VOC analysis.

## 6.5 Sampling Documentation

The sample team or individual performing a particular activity shall be required to keep a weatherproof field notebook. Field notebooks are intended to provide sufficient data and observations to enable participants to reconstruct events that occurred during projects and to refresh the memory of the field personnel if called upon to give testimony during legal proceedings. In a legal proceeding, notes, if referred to, are subject to cross-examination and are admissible as evidence. The field notebook entries should be factual, detailed, and objective. All entries are to be signed and dated. All members of the field investigation team are to use this notebook, which shall be kept as a permanent record. The field notebook shall be filled out at the location of sample collection immediately after sampling. It shall contain sample descriptions including: sample number, sample collection time, sample location, sample description, sampling method used, daily weather conditions, field measurements, name of sampler, and other site-specific observations. The field notebook shall contain any deviations from the protocol contained herein, visitor's names, community contacts made during sampling, and geologic and other site-specific information that may be noteworthy.

Chain-of-custody forms, sample labels, custody seals, and other documents shall be filled out as specified in Section 4.0 of the USEPA *A Compendium of Superfund Field Operations Manual,* 1987. Additionally, a dedicated sampling master log shall be maintained as the field program progresses. The sample logbook shall contain the sample number, sample date/time, sampling team, and chain-of-custody.

## 6.6 Chain-of-Custody Protocol

The primary objective of the sample custody procedures is to create an accurate written record that can be used to trace the possession and handling of all samples from the moment of their collection, through analysis, until their final disposition. Sample custody for samples collected during the investigation will be maintained by the on-site hydrogeologist or the field personnel collecting the samples. Field personnel are responsible for documenting each sample transfer and maintaining custody of all samples until they are shipped to the laboratory.

Chain-of-custody forms will be completed at the time of sample collection and will accompany the samples inside the cooler for shipment to the selected laboratory.

# 7. Performance Criteria

## 7.1 Field and Consulting Engineering Services

Impact Environmental Consulting, Inc. ("contractor") and its designated subcontractors, will perform all field activities. The subcontractors that are anticipated to be used for the performance of the FRI are presented below:

Chemtech, Inc. (*Certified Laboratory*)
110 Route 4
Englewood, NJ 07631
(201) 567-6868

Fenley and Nicol Environmental (*Well Installation*)
445 Brook Avenue
Deer Park, New York 11729
(631) 586-4900

Tank Specialists, Inc. (*Excavation*)
2 Park Place
Glen Cove, New York
(516) 759-9318

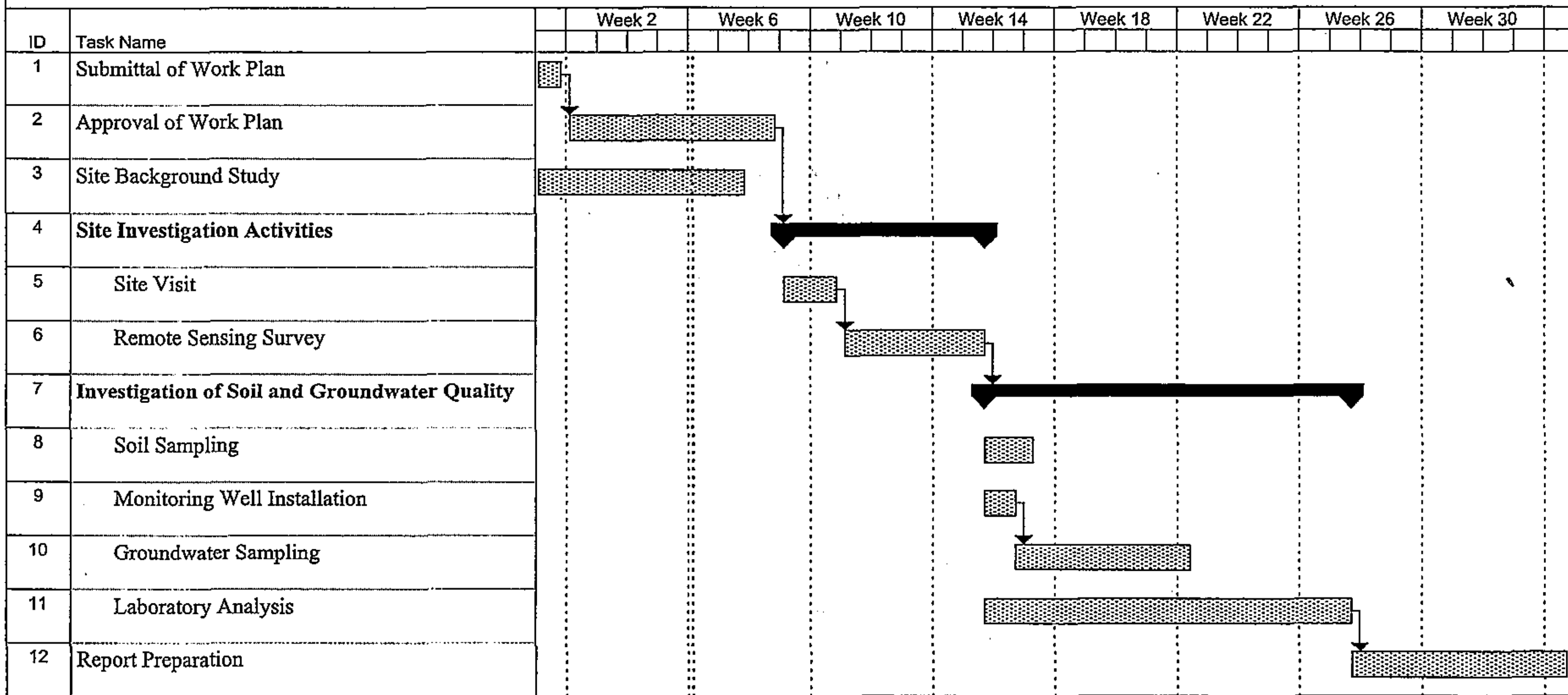
## 7.2 Site Representation

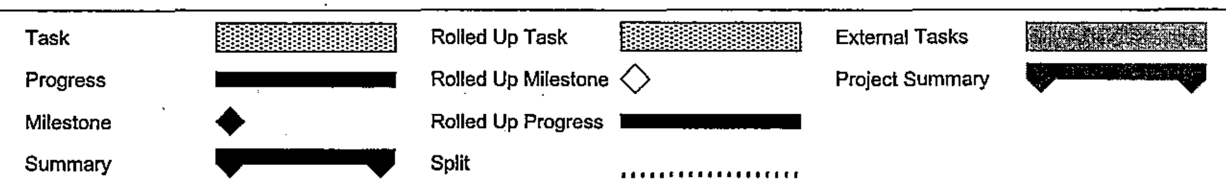
All on-site activities will be supervised by a representative of Grand Machinery Exchange, Inc. that is qualified to audit all field mobilization and investigative activities. Said representative will be identified as the Project Field Manager. The Project Field Manager will be on-site during the performance of all work performed by the contractor and its subcontractors. The qualifications of key personal including the Project Field Manager are provided in Appendix E.

## 7.3 Chronological Description of FRI

The time line that will be used for the study is outlined in **Table 3:** FRI Performance Schedule.

**Table 3: FRI Performance Schedule**
36 Sylvester Street Site No. 1-30-043U




**Impact Environmental**

*a division of impact environmental consulting, inc.*

GMEI-00093

## 8. Reporting of Results

All laboratory-reporting procedures will comply with the NYSDEC ASP and the New York State Department of Health Environmental Laboratory Approval Program (NYSDOH ELAP). In addition, all sample analyses will be done by a NYSDOH ELAP CLP certified laboratory and the data will be reported in the NYSDEC ASP Category B deliverables package format. The NYSDEC Department of Environmental Remediation (DER) Data Usability Summary Report (DUSR) will be used for data review. The data packages will be evaluated according to the DER DUSR Guidelines, Revised 9/97. Kevin Kleaka will author the DUSR.

# 9. Health and Safety Plan

## 9.1 Introduction

This Health and Safety Plan (HASP) describes the procedures to be followed in order to reduce employee exposure to potential health hazards that may be present at the project site. The emergency response procedures necessary to respond to such hazards are also described within this HASP.

### *9.1.1 Purpose*

The purpose of this HASP is to provide the contractor's field personnel, subcontractors, and other visitors with an understanding of the potential chemical and physical hazards that exist or may arise while the tasks of this project are being performed.

### *9.1.2 Objective*

This Health and Safety Plan is required in accordance with OSHA 29 CFR 1910.120. The primary objective is to ensure the well being of all field personnel and the community surrounding this site. In order to accomplish this, project staff and approved subcontractors shall acknowledge and adhere to the policies and procedures established herein. Accordingly, all personnel assigned to this project shall read this HASP and sign the Agreement and Acknowledgment Statement (Appendix) to certify that they have read, understood, and agree to abide by its provisions.

The contractor's personnel have the authority to stop work performed by our sub-contractors at this site if said work is not performed in accordance with the requirements of this HASP.

### *9.1.3 Amendments*

Any changes in the scope of work of this project and/or site conditions must be amended in writing and approved by the Regional Health and Safety Manager.

## 9.2 Emergency Response

In order to properly prepare for emergencies, personal protective equipment (PPE) will be worn by site workers and first aid equipment will be kept at the site. Material Safety Data Sheets (MSDS) will be maintained for all contaminants that workers may be exposed to.

*9.2.1 Onsite Emergency Response*

In the event of an accident or emergency situation, emergency procedures will be executed. Said procedures can and will be executed by the first person to observe an accident or emergency situation. The Project Field Manager will be notified about the situation immediately after emergency procedures are implemented. A list of the pertinent personnel authorized to be present on site is as follows:

| Title | Name | Telephone Number |
|---|---|---|
| Project Manager | Richard Parrish | (631) 269-8800 |
| Project Field Manager | Keith Franzen | (631) 269-8800 |
| Quality Assurance Officer | Kevin Kleaka | (631) 269-8800 |
| Site Safety Officer | Eric Krist | (631) 269-8800 |
| Site Contact | Paul Merandi | (212) 226-5356 |
| State Agency Contact (NYS DEC) | Richard Lilly | (518) 457-1708 |

*9.2.2 Emergency Contacts*

| | |
|---|---|
| Ambulance/Emergency: | *Nassau County Medical Center* 516-572-6655 |
| Police: | 911 or *Westbury Police Dept.* 516-573-5275 |
| Fire Department: | *Westbury Fire Dept.* 516-921-0000 |
| Poison Control Center: | 800-336-6997 |
| Hospital: | *Nassau County Medical Center* 516-572-0123 |
| Directions: | Take Garden Street south and turn left onto Grand Blvd. Continue east on Grand Blvd. and turn right onto Carman Ave. Travel approximately two miles south on Carman Ave. and the hospital will be on the left immediately after the Nassau County Jail. |
| State Police: | 516-756-3300 |
| National Response Center: | 800-424-8802 |
| US EPA (24-hour hotline): | 800-424-9346 |

*9.2.3 Who to Contact Before Initiating Subsurface Investigation Work*

Impact Environmental Consulting, Inc. ("Impact") representatives are responsible for contacting appropriate agencies prior to conducting on-site activities when applicable.

| | |
|---|---|
| Gas Company: | *Brooklyn Union Gas* 718-643-4050 |
| Telephone Company: | *Bell Atlantic* 516-661-6000 |
| Electric Company: | *Marketspan* 516-222-7700 |

### *9.2.4 Contingency / Evacuation Plan*

It may be possible that a site emergency could necessitate the evacuation of all personnel from the site. If such a situation develops, an audible alarm shall be given for site evacuation (consisting of an air horn). Personnel shall evacuate the site in a calm and controlled fashion and regroup at a predetermined location. The route of evacuation will be dependent on wind direction, severity, type of incident, etc.

The site must not be re-entered until back-up help, monitoring equipment, and/or personal protective equipment are on hand and the appropriate regulatory agencies have been notified.

### *9.2.5 Standard Procedures for Injury*

1. Telephone for ambulance/medical assistance if necessary. Whenever possible, notify the receiving hospital (listed in 9.1.2) of the nature of physical injury or chemical overexposure. If no phone is available, transport the person to the nearest hospital. Refer to Appendix for map to hospital.
2. Bring this Health and Safety Plan with the attached MSDSs to the medical facility with the injured person.
3. If the injury is minor, proceed to administer first aid.
4. Notify the Site Safety Officer, Project Manager, and the Regional Safety Director of all accidents, incidents, and near emergency situations.

### *9.2.6 Emergency Treatment*

When transporting an injured person to a hospital, bring this Health and Safety Plan to assist medical personnel with diagnosis and treatment. In all cases of chemical overexposure, follow standard procedures as outlined below for poison management, first aid, and, if applicable, cardiopulmonary resuscitation. Different routes of exposure and their respective first aid/poison management procedures are outlined below.

### *9.2.7 Ingestion*

Do not induce vomiting unless prompted by a health professional. Transport person to nearest hospital immediately.

### *9.2.8 Inhalation / Confined Space*

Do not enter a confined space to rescue someone who has been overcome unless properly equipped and a standby person present.

### *9.2.9 Inhalation / Other*

Move the person from the contaminated environment. Initiate CPR if necessary. Call or have someone call for medical assistance. Refer to MSDS for additional specific information. If necessary, transport the victim to the nearest hospital as soon as possible.

### *9.2.10 Skin Contact / Non-Caustic Contaminant (Petroleum, Gasoline, etc.)*

Wash off skin with a large amount of water immediately. Remove any affected clothing and rewash skin using soap, if available. Transport person to a medical facility if necessary.

### *9.2.11 Skin Contact / Corrosive Contaminant (Acids, Hydrogen Peroxide, etc.)*

Wash off skin with a large amount of water immediately. Remove any affected clothing and rewash skin with water. Transport person to a medical facility if necessary.

### *9.2.12 Eyes*

Hold eyelids open and rinse the eyes immediately with large amounts of water for 15 minutes. Never permit the eyes to be rubbed. Transport person to a medical facility as soon as possible.

## 9.3 Informational Summary

### *9.3.1 Health and Safety Summary*

Site Specific chemicals of Concern: Benzene, MTBE, Tetrachloroethene, Toluene, Trans 1,2 Dichloroethane, Trichloroethene, Xylene(s), and Vinyl Chloride.

These chemicals are of moderate to low hazard. Therefore, modified level D personal protective equipment will be required at all times when on site. Changes to this requirement will be required as follows.

Level C protection, as described in this plan, will be available at a minimum for those activities that involve surface and subsurface soil (strata disturbance, such as well installation, and all subsurface media sampling activities such as split-spoon sampling and borings).

The Site Safety Officer will determine whether or not a level of protection can be upgraded or downgraded. Changes in the level of protection will be recorded in the dedicated site logbook along with the rationale for the changes. Level D protection may be used for those activities that do not pose a potential threat of exposure to toxic or hazardous substances. Typical Level D activities may include sediment, logging and groundwater sampling, as well as surficial site surveys. Level C protection equipment should be readily available at all times. Consistent with OSHA training, prior to donning Level C, oxygen percent must be continuously monitored.

Action levels represent those conditions that a person requires an upgrade of personal protective equipment (PPE). Organic concentrations are to be monitored in the field by the use of a flame ionization or photo ionization detector (FID or PID) with readings being taken in a breathing zone occupied by field personnel to determine whether an action level has been exceeded. The information presented below applies to the above chemical constituents. All air monitoring results should be logged in the Site Safety Log.

All initial site access and activities will be done in Level D attire.

**Ionization Detector Response**

Flame Ionization Detector (FID)

| Concentrations (in ppm) | Level of PPE Required |
|---|---|
| 0.0 to 5.0 | Level D |
| 5.0 to 250.0 | Level C |
| 250.0 to 750.0 | Level B |
| Above 750.0 | Immediately withdraw from the area |

**Combustible Gas Response**

Combustible Gas Indicator (CGI)

| Results (% of LEL) | Procedure |
|---|---|
| 0.0 to 20.0 | Continue with normal activity |
| Above 20.0 | Immediately withdraw from the area |

**Oxygen Detector Response**

Combustible Gas Indicator (CGI)

| Results (% Oxygen) | Procedure |
|---|---|
| 0.0 to 19.5 | Level B PPE is required |
| 19.5 to 23.0 | Continue with normal activity |
| Above 23.0 | Immediately withdraw from the area |

## 9.4 Hazard Evaluation

### *9.4.1 Site Tasks*

The field tasks covered by the HASP may include well installation, development, gauging, and bailing; soil & groundwater handling/sampling; and confined space (excavation) entry and job task hazards.

### *9.4.2 Job Task Hazards*

The following hazards may be encountered.

• Organic Vapors

The inhalation of volatile organic vapors during all operations can pose a potential health hazard. Hazard reduction procedures include monitoring the ambient air with a FID and the use of appropriate PPE. Workers should stand upwind of the source of contamination whenever possible.

• Flammable Vapors

The presence of flammable vapors can pose a potential fire and health hazard. Hazard reduction procedures include monitoring the ambient air with an oxygen/LEL meter (combustible gas indicator). If the LEL reading exceeds 20%, leave the site immediately and contact the fire department.

• Oxygen

Atmospheres that contain a level of oxygen greater than 23% pose an extreme fire hazard (the usual ambient oxygen level is approximately 20.5%). This hazard can be compounded by the fact that vapors associated with this site are highly flammable. All personnel encountering atmospheres that contain a level of oxygen greater than 23% must evacuate the site immediately and must notify the Fire Department. If the oxygen level is less than 19.5%, do not enter the space without level B PPE.

• Vehicular Traffic

All employees will be required to wear a fluorescent safety vest at all times while on site. In addition, supplemental traffic safety equipment use can be exercised when warranted by specific task. Supplemental equipment can be items such as cones, flags, barricades, and/or caution tape.

### *9.4.3 Well Installation, Development, Gauging, Bailing; Soil & Groundwater Sampling*

Skin and eye contact with contaminated groundwater and/or soil may occur during these tasks. Nitrile gloves and approved safety glasses must be worn.

### *9.4.4 Sample Preservation*

When hydrochloric acid is used, skin and eye contact can occur. This hazard can be reduced with the use of Nitrile gloves and safety glasses. Safety goggles should be worn if there is a potential for a splash hazard.

### *9.4.5 Cleaning Equipment*

Skin and eye contact with methanol, "Alconox", or other cleaning substances can occur while decontaminating equipment. This hazard can be reduced with the use of Nitrile gloves and safety glasses.

### *9.4.6 Confined Space Entry*

Excavation pits, storage tanks, soil trenches, subsurface vaults, basements, and sheds are examples of confined spaces. Confined spaces can be identified as an area having one of the following characteristics:

- Limited access and egress
- Unfavorable for natural ventilation
- Not designed for continuous human occupancy

Organic and/or combustible vapors may be trapped in confined spaces, resulting in lack of oxygen (anoxia) and/or overexposure to vapors. When site work takes place in a confined space, the air must be monitored for oxygen level, flammable vapors, and toxic vapors. The following air monitoring procedures must be followed before entering a confined space.

a. Oxygen Level

Monitor for percent oxygen with an oxygen/LEL meter (e.g., CGI) to ensure an oxygen level between 19.5 and 23%. Because of the high vapor density of the contaminants associated with this site, there is a high probability that vapors in the enclosed spaces or vaults will replace any oxygen that is present, even if the space is open to the air. Therefore, oxygen level monitoring will be done at the top, middle, and bottom of the enclosed space to determine if there is a minimum acceptable oxygen level of 19.5% prior to entry. The oxygen/LEL meter is factory-set to sound an alarm at levels less than 19.5% oxygen. **If oxygen is less than 19.5% or greater than 23%, do not enter the space.**

b. Explosive Vapors

Monitor the percentage of the Lower Explosive Limit (LEL) with an oxygen/LEL meter to determine whether vapor concentrations within the confined space are within the flammable range. If LEL readings exceed 10%, personnel should exercise extreme caution, use non-sparking tools, and utilize ventilation engineering controls to reduce LEL levels. The oxygen/LEL meter is factory set to sound an alarm at levels greater than 20% LEL. If LEL readings exceed 20%, **personnel <u>MUST</u> leave the site immediately and contact the project manager.**

c. Toxic Vapors

Monitor for toxic vapors with a FID (e.g., Photovac OVA) to determine whether toxic vapors within the confined space exceed the action levels. PID readings will be taken at the top, middle, and bottom of a vault, shed, or other confined space to determine vapor levels.

<u>Summary</u>

Do not enter the confined space unless:

- the oxygen concentration is between 19.5 and 23%;
- the LEL is less than 20%; and
- FID readings are less than 250 ppm (a respirator must be worn if the readings exceed 5 ppm)

All monitoring equipment must be calibrated and maintained in accordance with manufacturer's recommendations.

*9.4.7 Occupational Noise*

Requirements set forth in the OSHA Hearing Conservation Regulation (OSHA 1910.95) shall be adhered to during work on-site. Hearing protection shall be provided to the employees where sound pressure levels exceed 85 dB. Hearing protection shall be worn where sound pressure levels in areas and/or on equipment exceeds 90 dB. Typical drilling operations have been monitored with a sound level meter and indicate that hearing protection is required for all personnel while engaged in this action.

*9.4.8 Heat Stress*

Since climatic changes cannot be avoided, work schedules will be adjusted to provide time intervals for intake of juices, juice products, and water in an area free from contamination and in quantities appropriate for fluid replacement.

Heat stress may occur even in moderate temperature areas and may present any or all of the following:

A. Heat Rash

Result of continuous exposure to heat, humid air, and chafing clothes. Heat rash is uncomfortable and decreases the ability to tolerate heat.

B. Heat Cramps

Result of the inadequate replacement of body electrolytes lost through perspiration. Signs include severe spasms and pain in the extremities and abdomen.

C. Heat Exhaustion

Result of increased stress on the vital organs of the body in the effort to meet the body's cooling demands. Signs include shallow breathing; pale, cool, moist skin; profuse sweating; and dizziness.

D. Heat Stroke

Result of overworked cooling system. Heat stroke is the most serious form of heat stress. Body surfaces must be cooled and medical help must be obtained immediately to prevent severe injury and/or death. Signs include red, hot, dry skin, absence of perspiration, nausea, dizziness and confusion, strong, rapid pulse, coma, and death.

Heat Stress Prevention

A. Replace body fluids (water and electrolytes) lost through perspiration. Solutions may include a 0.1% salt and water solution or commercial mixes such as "Gatorade". Employees must be encouraged to drink more than the amount required in order to satisfy thirst.

B. Use cooling devices to aid the natural body ventilation. Cooling occurs through evaporation of perspiration and limited body contact with heat-absorbing protective clothing. Utilize fans and air conditioners to assist in evaporation. Long, cotton underwear is suggested to absorb perspiration and limit any contact with heat-absorbing protective clothing (i.e., coated Tyvek suits).

C. Conduct non-emergency response activities in the early morning or evening during very hot weather.

D. Provide shelter against heat and direct sunlight to protect personnel. Take breaks in shaded areas.

E. Rotate workers utilizing protective clothing during hot weather.

F. Establish a work regime that will provide adequate rest periods, with personnel working in shifts.

Heat Stress Monitoring

Heat stress may occur even in moderate temperatures and may present heat rash, heat cramps, heat exhaustion, and/or heat stroke.

Monitoring procedures should be implemented to prevent heat stress arising from environmental conditions, use of PPE, and/or intensity of workload.

For temperatures above 70 °F, the following regime shall be followed for workers wearing permeable coveralls:

| Adjusted Temperature | Normal Ensemble | Impermeable Ensemble |
|---|---|---|
| 90 °F or above | After 45 min. of work | After 15 min. of work |
| 87.5 to 90 °F | After 60 min. of work | After 30 min. of work |
| 82.5 to 87.5 °F | After 90 min. of work | After 60 min. of work |

| | | |
|---|---|---|
| 77.5 to 82.5 °F | After 120 min. of work | After 90 min. of work |
| 72.5 to 77.5 °F | After 150 min. of work | After 120 min. of work |

Workers wearing semi-permeable or impermeable encapsulating protective clothing should be monitored for heart rate and temperature when the temperature in the work area is above 70 °F. In order to monitor the worker, measure:

A. Heart rate - Count the radial pulse during a 30-second period as early as possible in the rest period. If the heart rate exceeds 110 beats per minute at the beginning of the rest period, shorten the next work cycle by one-third.

B. Oral temperature - Use a clinical thermometer or similar device to measure the oral temperature at the end of the work period (before drinking). If oral temperature exceeds 99.6 °F, shorten the next work cycle by one-third.

Do not permit a worker to wear a semi-permeable or impermeable garment if the core body temperature exceeds 100.6 °F.

Workers shall not be required to continue working if they feel any of the symptoms of heat stress. Rest periods should be a minimum of 15 minutes. Length of rest period should be extended as appropriate or as recommended by the Site Safety Officer or alternate.

*9.4.9 Exposure: Cold Stress*

Work schedules will be adjusted to provide sufficient rest periods in a heated area for warming up during operations conducted in cold weather. Also, thermal protective clothing such as wind and/or moisture resistant outerwear is recommended to be worn.

If work is performed continuously in the cold at or below -7 °C (20 °F), including wind chill factor, heated warming shelters (tents, cabins, company vehicles, rest rooms, etc.) shall be made available nearby and the worker should be encouraged to use these shelters at regular intervals, the frequency depending on the severity of the environmental exposure. The onset of heavy shivering, frostnip, the feeling of excessive fatigue, drowsiness, irritability, or euphoria, are indications for immediate return to the shelter. When entering the heated shelter, the outer layer of clothing shall be removed and the remainder of the clothing loosened to permit sweat evaporation. A change of dry work clothing shall be provided as necessary to prevent workers from returning to their work with wet clothing.

Dehydration, or the loss of body fluids, occurs in the cold environment and may increase the susceptibility of the worker to cold injury due to a significant change in blood flow to the extremities. Warm sweet drinks and soups should be provided at the work site to provide caloric intake and fluid volume. The intake of coffee should be limited because of a diuretic and circulatory effect (Adapted from TLV's and Biological Exposure Indices 1988-1989, ACGIH).

## 9.5 Personal Protective Equipment

The following is a breakdown of the types of protective clothing and equipment to be used during the site activities. Personal protective equipment (PPE) is in conformance with EPA criteria for Level B, C, and D protection. All respiratory protective equipment used will be approved by NIOSH/MSHA.

Level C protection, as described in this plan, will be available at a minimum for those activities that involve surface and subsurface soil (strata disturbance such as well installation, and all subsurface media sampling activities such as split-spoon sampling and borings). Some activities may require Level B protection. In atmospheres potentially containing toluene and xylenes, the protective ensemble should include chemical resistant clothing since the two compounds have skin absorption potential.

The Site Safety Officer will determine whether or not a level of protection can be upgraded or downgraded. Changes in the level of protection will be recorded in the dedicated site logbook along with the rationale for the changes. Level D protection may be used for those activities that do not pose a potential threat of exposure to toxic or hazardous substances. Typical Level D activities may include sediment, logging and groundwater sampling, as well as surficial site surveys. Level C protection equipment should be readily available at all times. Consistent with OSHA training, prior to donning Level C, the percentage of oxygen must be continuously monitored.

<u>Level D</u>

- hard hat
- safety glasses
- steel toe and shank boots
- fluorescent vest
- splash goggles
- hearing protection (as appropriate)

<u>Modified Level D</u>

- hard hat
- safety glasses
- steel toe and shank boots

- fluorescent vest
- Nitrile "N-Dex" inner gloves
- latex outer boots (chemical resistant)
- splash goggles
- polyethylene coated Tyvek suit
- hearing protection (as appropriate)

<u>Level C</u>

- buddy system required at all times
- full face respirator with NIOSH approved OV/AG/HEPA combination cartridges (MSA GMC-H)
- Saranex coated Tyvek Suit
- inner Nitrile "N-Dex" gloves
- outer Nitrile (NBR) gloves
- steel toe and shank boots
- outer boots (chemical resistant)
- hard hat
- hearing protection (as appropriate)

<u>Level B</u>

Regional Health and Safety representatives must be on site upon start-up of <u>any</u> project requiring level B protection. This should be understood to include subcontractors conducting Level B activity.

- buddy system required at all times
- supplied air respirator or SCBA
- Saranex coated Tyvek Suit
- inner Nitrile "N-Dex" gloves
- outer Nitrile (NBR) gloves
- steel toe and shank boots
- outer boots (chemical resistant)
- hard hat
- hearing protection (as appropriate)

Note: Respirator cartridges will be changed once per day at a minimum. This can be accomplished at the end of the workday during respirator decontamination. If odor breakthrough is detected while wearing the respirator or if breathing becomes difficult, change cartridges immediately.

Contact with contaminated surfaces, or surfaces suspected of being contaminated, should be avoided. This includes walking through, kneeling in, or placing equipment in puddles, mud, discolored surfaces, or on drums and other containers. Eating, smoking, drinking, and/or the application of cosmetics in the immediate work area is prohibited.

When utilizing protective garments such as Tyvek suits, gloves, and booties, all seams between protective items will be sealed with duct tape.

The use of contact lenses on the job site is strongly advised against. However, when glasses are not available, contact lenses are preferred over faulty vision. When contact lenses are worn, safety glasses and/or goggles must be worn at all times while on the job site.

## 9.6 Decontamination

### *9.6.1 General*

Personnel involved in work activities at the site may be exposed to compounds in a number of ways, despite the most stringent protective procedures. Site personnel may come in contact with vapors, gases, mists, or particulates in the air, or other site media while performing site duties. Use of monitoring instruments and site equipment can also result in exposure and transmittal of hazardous substances.

In general, decontamination involves scrubbing with a detergent water solution followed by clean water rinses. All disposable items shall be disposed of in a dry container. Certain parts of contaminated respirators, such as harness assemblies and leather or cloth components, are difficult to decontaminate. If grossly contaminated, they may have to be discarded. Rubber components can be soaked in detergent and water and scrubbed with a brush. In addition to being contaminated, all respirators, non-disposable protective clothing, and other personal articles must be sanitized or replaced before they can be used again if they become soiled from exhalation, body oils, and perspiration. The manufacturer's instructions should be followed in sanitizing the respirator masks.

The Site Safety Officer will be responsible for the proper maintenance, decontamination, and sanitizing of all respirator equipment.

The decontamination zone layout and procedures should match the prescribed levels of personal protection. A detailed discussion for the establishment of the project decontamination zone and the procedures required for the various levels of personnel protection follows.

Exclusion Zone (EZ)

It is within this zone that the work activities are performed. No one shall enter this zone unless the appropriate PPE is donned.

Contaminant Reduction Zone (CRZ)

It is within this zone that the decontamination process is undertaken. Personnel and their equipment must be adequately decontaminated before leaving this zone for the support zone. This zone will be set up between the EZ and a well-ventilated open area.

Support Zone (SZ)

The support zone is considered to be uncontaminated; as such, protective clothing and equipment are not required but should be available for use in emergencies. All equipment and materials are stored and maintained within this zone. Protective clothing is put on in the SZ before entering the CRZ. The SZ will be established in a safe environment.

The following procedures have been established to provide site personnel with minimum guidelines for proper decontamination. Personnel leaving the point of operations designated as the EZ must follow these minimum procedures. The decontamination process shall take place at a reasonable distance away from any area of potential contamination.

*9.6.2 Minimum Decontamination Procedure*

Personnel leaving the point of operations should wash outer gloves and boots. At a minimum, the outer boots shall be removed first and stored in an appropriate area or disposed of properly. Outer boots must be properly washed where gross contamination is evident. Personnel shall then remove and dispose of the Tyvek suits. Personnel should remove the Tyvek suits so that the inner clothing does not come in contact with any contaminated surfaces. After Tyvek removal, personnel shall remove and discard outer Nitrile gloves. Personnel shall then remove the respirator, where applicable. Respirators shall be disinfected between uses with towelettes or other sanitary methods. Potable water, at a minimum, will be present so that site personnel can thoroughly wash hands and face after leaving the point of operations.

Portable wash stations shall be utilized for easy and efficient access. The wash station shall consist of a potable water supply, hand soap, and clean towels. Portable sprayer units filled with Alconox solution and potable water should also be available to wash and rinse off grossly contaminated boots, gloves, and equipment. The Site Safety Officer will monitor decontamination procedures to ensure their effectiveness. Modifications of the decontamination procedure may be necessary as determined by the Site Safety Officer's observations.

### *9.6.3 Standard Decontamination Procedure*

The following decontamination procedures should be implemented during site operations for the appropriate level of protection.

Level B

*Segregated equipment drop*

Deposit equipment (tools, sampling devices, notes, monitoring instruments, radios, etc.) used on the site onto plastic drop cloths.

*Boot covers and glove wash*

Outer boots and outer gloves should be scrubbed with a decontamination solution of detergent and water or replaced.

*Rinse off boot covers and gloves*

Decontamination solution should be rinsed off boot covers and gloves using generous amounts of water. Repeat as many times as necessary.

*Tape removal*

Remove tape from around boots and gloves and place into container with plastic liner.

*Boot cover removal*

Remove disposable boot covers and place into container with plastic liner.

*Outer glove removal*

Remove outer gloves and deposit in container with plastic liner.

*Suit / safety boot wash*

Completely wash splash suit, SCBA, gloves, and safety boots. Care should be exercised that no water is allowed into the SCBA regulator. It is suggested that the SCBA regulator be wrapped in plastic.

*Suit / safety boot rinse*

Thoroughly rinse off all decontamination solution from protective clothing.

*Tank or canister changes*

This is the last step in the decontamination procedure for those workers wishing to change air tanks and return to the EZ. The worker's air tank or cartridge is exchanged, new outer glove and boot covers are donned, and joints taped.

*Removal of safety boots*

Remove safety boots and deposit in container with a plastic liner.

*SCBA backpack removal*

Without removing the face piece, the SCBA backpack should be removed and placed on a table. The face piece should then be disconnected from the remaining SCBA unit and then proceed to the next station.

*Splash suit removal*

With care, remove the splash suit. The exterior of the splash suit should not come in contact with any inner layers of clothing.

*Inner glove wash*

The inner gloves should be washed with a mild decontamination solution (detergent / water)

*Inner glove rinse*

Generously rinse the inner gloves with water.

*Face piece removal*

Without touching the face with gloves, remove the face piece. The face piece should be deposited into a container that has a plastic liner.

*Inner glove removal*

Remove the inner glove and deposit into a container that has a plastic liner.

*Field wash*

Wash hands and face thoroughly. If highly toxic, skin corrosive, or skin absorbent materials are known or suspected to be present, a shower should be taken.

*Level C and Level D*

The decontamination procedure for Level C and Level D personal protection will employ applicable steps detailed in the Level B decontamination process.

*9.6.4 Sampling Equipment and Sample Container Decontamination*

All non-disposable sampling equipment will be decontaminated with an Alconox / water solution followed by a clean water rinse. As an added precaution against cross-contamination, all non-disposable sampling equipment will be rinsed with distilled water. All disposable sampling equipment will be properly disposed of in dry containers.

Before leaving the site, all sample containers will be thoroughly decontaminated using a detergent and water solution followed by a clean water rinse. The decontamination procedure should include a complete scrubbing of the container's surface to remove possible contamination. Care must be exercised to prevent damage to sample container identification labels.

## 9.7 Health and Safety Requirements

### *9.7.1 Medical Monitoring Program*

A baseline physical examination must be conducted on all employees before they are permitted to engage in sampling, cleanup, and remedial action work. A complete medical survey should be completed on each employee upon start of employment. Yearly re-examination should be performed to update information on employee health status. Additional re-evaluation will be considered in the event of a chemical overexposure. These medical surveillance requirements shall comply with OSHA regulations as defined in 29 CFR 1910.120.

### *9.7.2 Training*

All personnel working at this site should have received a minimum of 40 hours of initial hazardous waste activity instruction, and a minimum of three days of field experience under direct supervision of a trained, experienced person. Personnel assigned to the site will also receive eight hours refresher training per year. On-site managers and supervisors directly responsible for employees engaged in hazardous waste operations have received an additional eight hours of supervisory training. These training requirements comply with the OSHA Hazardous Waste Operations and Emergency Response Regulation, 29 CFR 1910.120.

### *9.7.3 Visitor Policy*

All visitors and/or trainees on site must submit to the limitations described herein.

### *9.7.4 Work Zone Area*

Work and support areas shall be established based on ambient air data and proposed work sites. They shall be established in order to contain contamination within the smallest areas possible and shall ensure that each employee has the proper PPE for the area or zone in which work is to be performed.

### *9.7.5 First Aid Equipment*

Vehicles used for site work will be equipped with a first aid kit and safety equipment including:

- fluorescent vests
- cones (and flags as needed)
- hazard tape (barricades as needed)
- mounted fire extinguisher (10 pound A/B/C type)
- working flashlight
- water, suitable for drinking
- portable eye wash
- first aid kit with appropriate bandage material
- full body harness with lifeline (for confined space entry)

### *9.7.6 Fire Prevention*

During equipment operation, periodic vapor concentration measurements should be taken with an explosimeter or combustimeter. If at any time the vapor concentrations exceed 20% of the LEL, then the Site Safety Officer or designated field worker should immediately shut down all operations.

Only approved safety cans will be used to transport and store flammable liquids.

All gasoline and diesel-driven engines requiring refueling must be shut down and allowed to cool prior to filling.

Smoking is not allowed during any operations within the work area in which petroleum products or solvents in free-floating, dissolved, or vapor forms, or other flammable liquids may be present.

No open flame or spark is allowed in any area containing petroleum products or other flammable liquids.

### *9.7.7 Heavy Machinery / Equipment*

All site employees must remain aware of those site activities that involve the use of heavy equipment and machinery. Respiratory protection and protective eyewear may be worn frequently during site activities. This protective equipment significantly reduces peripheral vision of the wearer. Therefore, it is essential that all employees at the site exercise extreme caution during operation of equipment and machinery to avoid physical injury to themselves or others.

*9.7.8 Additional Safety Practices*

The following are important safety precautions that will be enforced during work activities.

1. Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in any area designated as contaminated.
2. Hands and face must be thoroughly washed upon leaving the work area and before eating, drinking, or any other activity.
3. Whenever decontamination procedures for outer garments are in effect, the entire body should be thoroughly washed as soon as possible after the protective garments are removed.
4. No excessive facial hair that interferes with the effectiveness of a respirator will be permitted on personnel required to wear respiratory protection equipment. The respirator must seal against the face so that the wearer receives air only through the air purifying cartridges attached to the respirator. Fit testing shall be performed prior to respirator use to ensure the wearer obtains a proper seal.
5. Contact with potentially contaminated surfaces should be avoided whenever possible. One should not walk through puddles; kneel on the ground; lean, sit, or place equipment on drums, containers, vehicles, or the ground.
6. Medicine and alcohol can potentate the effect from exposure to certain compounds. Prescribed drugs and alcoholic beverages should not be consumed by personnel involved in the project.
7. Personnel and equipment in the work areas should be minimized, consistent with effective site operations.
8. Work areas for various operational activities should be established.
9. Procedures for leaving the work area must be planned and implemented prior to going to the site. Work areas and decontamination procedures must be established on the basis of prevailing site conditions.
10. Respirators will be issued for the exclusive use of one worker and will be cleaned and disinfected after each use.
11. Safety gloves and boots shall be taped to the disposable, chemical-protective suits as necessary.
12. All unsafe equipment left unattended will be identified by a "DANGER, DO NOT OPERATE" tag.
13. Noise mufflers or earplugs may be required for all site personnel working around heavy equipment. This requirement will be at the discretion of the Site Safety Officer. Disposable, form-fitting plugs are preferred.
14. Cartridges for air-purifying respirators in use will be changed daily at a minimum.

## 9.8 Project Personnel

### *9.8.1 Project Manager*

The Project Manager will be responsible for implementing the project and obtaining any necessary personnel or resources for the completion of the project. Specific duties will include:

- coordinating the activities of all subcontractors, to include informing them of the required PPE and insuring their signature acknowledging this Site Safety Plan.
- selecting a Site Safety Officer and field personnel for the work to be undertaken on site.
- ensuring that the tasks assigned are being completed as planned and on schedule.
- providing authority and resources to ensure that the Site Safety Officer is able to implement and manage safety procedures.
- preparing reports and recommendations about the project to clients and affected personnel.
- ensuring that all persons allowed to enter the site (i.e., EPA, contractors, state officials, visitors are made aware of the potential hazards associated with the substances known or suspected to be on site, and are knowledgeable as to the on-site copy of the specific site safety plan.
- ensuring that the Site Safety Officer is aware of all of the provisions of this site safety plan and is instructing all personnel on site about the safety practices and emergency procedures defined in the plan.
- ensuring that the Site Safety Officer is making an effort to monitor site safety, and has designated a Field Team Leader to assist with the responsibility when necessary.

### *9.8.2 Site Safety Officer*

The Site Safety Officer shall be responsible for the implementation of the site safety plan on site. Specific duties will include:

- monitoring the compliance of field personnel for the routine and proper use of the PPE that has been designated for each task.
- routinely inspecting PPE and clothing to ensure that it is in good condition and is being stored and maintained properly.
- stopping work on the site or changing work assignments or procedures if any operation threatens the health and safety of workers or the public.
- monitoring personnel who enter and exit the site and all controlled access points.
- reporting any signs of fatigue, work-related stress, or chemical exposures to the Project Manager.
- dismissing field personnel from the site if their actions or negligence endangers themselves, co-workers, or the public, and reporting the same to the Project Manager.
- reporting any accidents or violations of the site safety plan to the Project Manager and

documenting the same for the project in the records.

- knowing emergency procedures, evacuation routes, and the telephone numbers of the ambulance, local hospital, poison control center, fire and police departments.
- ensuring that all project-relating personnel have signed the personnel agreement and acknowledgments form contained in this site safety plan.
- coordinate upgrading and downgrading PPE as necessary due to changes in exposure levels, monitoring results, weather, and other site conditions.
- perform air monitoring with approved instruments in accordance with requirements stated in this Site Safety Plan.

*9.8.3 Project Field Manager*

In the event that the Project Manager and the Site Safety Officer are not on site, the Project Field Manger will assume all responsibility of the Site Safety Officer.

*9.8.4 Quality Assurance Officer Responsibilities*

The Quality Assurance Officer (QAO) is an employee of the same consulting firm generating the work plan and acts in conjunction with the project manager to develop a site-specific quality assurance plan. The QAO must not have another position on the project, such as a project or task manager, that involves project productivity or profitability as job-performance criteria.

The project QAO must have a minimum of a bachelor's degree in chemistry or natural science with a minimum of 20 hours in chemistry. The QAO must be proficient in analytical methodology, data interpretation and validation, the development of sampling plans, quality control procedures, and auditing techniques.

The QAO will assist the project manager in the development of the sampling and analytical portion of the Quality Assurance Project Plan. The QAO or his/her designee shall conduct periodic field and sampling audits, interface with the analytical laboratory to make requests and resolve problems, interface with the data validator and develop a project-specific data usability report. Because on-site work may be necessary, verification or completion of the 40-hour OSHA safety training course and 8-hour refresher is required.

*9.8.5 Field Personnel*

All field personnel shall be responsible for acting in compliance with all safety procedures outlined in the Site Safety Plan. Any hazardous work situations or procedures should be reported to the Site Safety Officer so that corrective steps can be taken.

## 10. Quality Assurance/Quality Control Protocol

The following sampling QA/QC protocol is in accordance with the United States Environmental Protection (USEPA) Agency's accepted sampling procedures for hazardous waste streams (Municipal Research Laboratory, 1980, *Sampling and Analysis Procedures for Hazardous Material Waste Streams*, Office of Emergency and Remedial Response, Cincinnati, Ohio. EPA-600/280-018) and The American Society of Testing and Material's (ASTM) sampling procedures.

### 10.1 Sampling Personnel

The activities associated with the remedial investigation plan will be performed by or under the auspices of a Quality Assurance Officer (Kevin Kleaka, see qualifications in Appendix F). The sample staff (samplers) will possess a minimum of a BA Degree in the Earth, Space or Biological Sciences or a BS Degree in Engineering. Samplers will have a minimum of one (1) year experience in environmental/geological fieldwork. Additionally, all samplers will have received mandatory forty-hour Occupational Safety and Health Administration (OSHA) training on working with potentially hazardous materials and appropriate Hazard Communication Program and "Right-To-Know" training.

The following table summarizes the approximate number of samples, field and trip blanks, bottle type, EPA test type and preservatives for the proposed sampling plan.

| No. Samp. | No. Field Blanks | No. Trip Blanks | Media | Test Type | Bottle Type | Preservative |
|---|---|---|---|---|---|---|
| 17 | 1 | 1 | GW | EPA 624 | 40 ml VOA | 4 deg. C |

The following summarizes the sample holding times for the proposed sampling plan.

USEPA Test Method 8260: 14-day extraction time and 40 days to analyze
USEPA Test Method 8270BN: 14-day extraction time and 40 days to analyze (VOC and SVOC); 6 months to analyze for metals except 26 days to analyze for mercury in glass and 14 days to analyze mercury in plastic
USEPA Test Method: 624: 14-day extraction time; 40 days to analyze

## 10.2 Sampling Equipment

Separate QA/QC measures will be implemented for each of the instruments used in the performance of the SAP.

### *10.2.1 Geoprobe*

Prior to arrival on the Site and between sample locations, the probes will be decontaminated by steam cleaning, Alconox wash, and rinsing with distilled water. This will be followed by air drying as per project requirements. All sampling apparatus will be dedicated or disposable. A clean, new liner will be used for each sample. Parts will be inspected for wear and damage before each use.

### *10.2.2 Bailers*

In order to prevent contamination, all bailers will be dedicated and disposable.

### *10.2.3 Photo Ionization Detector*

Calibration of the PID will be conducted prior to sampling using a span gas of known concentration. The PID was a Photovac Micro-Tip, photo ionization detection meter.

### *10.2.4 Sample Vessels*

All sample vessels will be "level A" certified decontaminated containers supplied by a New York State Certified Commercial Laboratory. Samples analyzed for hydrocarbons will be placed in containers with Teflon lined caps. All samples will be preserved by cooling them to a temperature of approximately four degrees Celsius.

## 10.3 Sample Documentation

A sample represents physical evidence. An essential part of liability reduction is the proper control of gathered evidence. To establish proper control, proper sample identification and chain-of custody procedures will be followed as discussed below.

### *10.3.1 Sample Identification*

Sample identification will be executed by use of a sample tag, logbook and chain-of-custody form. Said documentation will provide the following information: 1) the project code; 2) the sample laboratory number; 3) the sample preservation; 4) the instrument used for source sample grabs; 5) the composite medium used for source sample grabs; 6) the date the sample was secured from the source media; 7) the time the sample was secured from the source media; and 8) the person who secured the sample from the source media.

### *10.3.2 Chain-of-Custody Procedures*

Due to the evidential nature of samples, possession will be traced from the time the samples are collected until they are received by the testing laboratory. A sample will be considered under custody if it: is in a person's possession; if is in a person's view after being in possession; is in a person's possession and they locked it up; or, it is in a designated secure area. When transferring custody, the individuals relinquishing and receiving the samples will sign, date and note the time on the Chain-of-Custody Form.

### *10.3.3 Laboratory-Custody Procedures*

A designated sample custodian will accept custody of the shipped samples and will verify that the information on the sample tags matches that on the Chain-of-Custody Records. Pertinent information as to shipment, pick-up, courier, etc., will be entered in the "remarks" section. The custodian will enter the sample tag data into a bound logbook.

The laboratory custodian will use the sample tag number, or assign a unique laboratory number to each sample tag, and assure that all samples will be transferred to the proper analyst or stored in the appropriate source area. The laboratory custodian will distribute samples to the appropriate analysts. Laboratory personnel will be responsible for the care and custody of samples, from the time they are received, until the sample is exhausted or returned to the sample custodian. All identifying data sheets and laboratory records will be retained as part of the permanent documentation. Samples received by the laboratory will be retained until after analysis and quality assurance checks are completed.

## 11. Community Health and Safety Plan

Due to the minimal ground disturbance that is anticipated during the sampling phase of the project, it is expected that only a small impact from generated dust could occur in the vicinity of the site. Well installation using the hollow stem auger, Geoprobe sampling, and GPR work can generate dust in small quantities. The ingress and egress of onsite vehicles can also create airborne dust.

To minimize the effects of dust on the community, sampling will only be performed on days that the local wind speeds (as measured by the National Weather Service at JFK Airport) are below 15 mph. All onsite vehicles will be required to travel at speeds no greater than 15 mph.

# APPENDICES

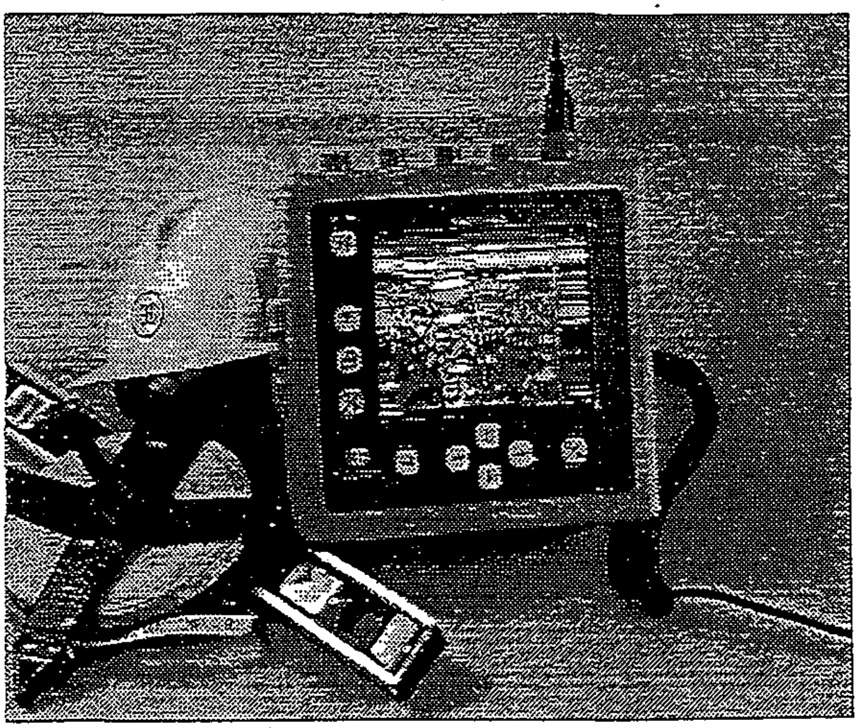
*36 Sylvester Street Site No. 1-30-043U*
*Westbury, New York*
*00-096*

# APPENDIX A:

**Geoprobe System Information**
*36 Sylvester Street Site No. 1-30-043U*
*Westbury, New York*
*00-096*

# SIR® SYSTEM-2

# OPERATION MANUAL



Rev A - May, 1996

Geophysical Survey Systems, Inc.
13 Klein Drive, P.O. Box 97
North Salem, NH 03073-0097
Phone: (603) 893-1109 / FAX: (603) 889-3984 / E-mail: gssisales@aol.com

Manual #MN72-140A

# How to Use This Manual

This manual is designed for both experienced and novice users of Subsurface Interface Radar (SIR) System-2. We recommend that all users read the entire manual.

This manual contains an index and glossary of terms for quick reference. On-screen help has also been provided for you. To access this help section while operating the SIR-2, press the *Help* key ? and an on-screen help menu will appear.

The following captions will help the SIR-2 user focus on key points in this manual:

**NOTE:**

This section will highlight important messages that point out the SIR-2's key features to help the user.

**CAUTION:**

This section will highlight important messages to help the user avoid processing pitfalls or fatal errors that could crash the system or result in the loss of data.

## About this Manual

Certain conventions are used in this manual where they refer to commands, functions and menus.

- MENU NAMES will appear in small capital letters.
- Tools and Functions will appear with initial capital letters.
- **Commands** you choose from the menus will appear in bold with the first letter capitalized.
- *Keys* on the keyboard will appear in italics.
- *Buttons* and *Icons* will also appear in italics.

**NOTE:**

This manual assumes that you will have a SIR-2 available and in operation when reading this manual.

Help can be obtained on any command by pressing the *Help* ? key for context-sensitive help and then the *Enter* key for general help.

# CHAPTER 1: INTRODUCTION

## 1.1 Unpacking Your System

Thank you for purchasing a GSSI SIR® System-2 (from now on referred to as SIR-2). A packing list is included with your shipment that identifies all of the items that are in your order. You should check your shipment against the packing list upon receipt of your shipment. If you find an item is missing or damaged during shipment, please call or fax your sales representative immediately so that we can correct the problem.

Your SIR-2 contains the following items:

1 - Digital Control Unit (DC-2)
1 - Antenna control cable
1 - DC Power cable (SIR-2 power connector on one end and a cigarette lighter plug on the other end)
1 - Power Connector Adapter (Cigarette lighter socket on one end and a GSSI three pin power connector on the other end)
1 - ~~Upgrade adapter cable (keyboard and serial port cable)~~ N/A [illegible] 12/12/96
1 - ~~Serial null modem cable (9 pin to 9 pin cable)~~
1 - DC-2 padded carrying case, with sunshade
1 - SIR System-2 Operation Manual
1 - PC operating system software, MS-DOS

If you purchased some the following available optional items they will also be included:

Portable Battery Kit
DPU-5400 Thermal Printer

## 1.2 General Description

The SIR-2 is a lightweight, portable, single channel general purpose ground penetrating radar system. The various components of the DC-2 control unit are briefly described below.

The major external components of the control unit are the keypad, video screen, connector panel and indicator lights. The keypad consists of 10 keys which are used to control operation of the unit. The VGA liquid crystal display (LCD) video screen provides real-time or playback viewing of the data. There are five connectors located on the SIR-2. The connector labeled BATTERY connects to the power supply. The connector labeled ANTENNA connects to a GSSI antenna. The PARALLEL connector is used to connect a thermal printer or to transfer data to a computer. The MULTIFUNCTION connector will connect to the upgrade adapter cable or optional Model 25 multifunction box. The XMIT connector provides a fiber optic transmit trigger output for the Model 3200 Multiple Low Frequency (MLF) antenna. The red and green indicator lights, located above the power switch, indicate power supply to the unit. The amber light on the upper right to indicate hard disk activity.

should shut down the system as soon as possible and replace or recharge your power source.

RED LIGHT - When the system is turned on the red light will illuminate.

The battery charger supplied by GSSI with the SIR-2 (if ordered with your system) has two lights on the front panel. One is a power indicator light which illuminates when input power is applied to the unit. The other is a "fast-charge" light which will illuminate only during the initial or "fast-charge" phase of battery recharge. When this light goes out, it does not mean that the battery is fully charged, only that the initial or high-current draw phase of the recharge has finished. To ensure that the battery is fully charged, leave it connected to the charger for at least 8 hours.

Note: When using a GSSI high or very high powered transmitter (Models 775, 776, 777 or 778) with the SIR-2 you should use the GSSI Model 570 fiber-optic trigger between the transmitting and receiving antennas. The SIR-2 does not have sufficient power to drive the high power pulse amplifiers at a satisfactory repetition rate when a coaxial cable is connecting the transmitting and receiving antennas.

## 1.4 Operating Environment

The SIR-2 is designed to operate from 0°C (32°F) to 40°C (104°F). The unit is environmentally sealed and can be used in dusty or humid environments. Though the system is designed to withstand occasional exposure to water it should not be deliberately subjected to rain or immersed in water. A heat-sink plate is located in the bottom of the system and used to regulate the internal temperature of the unit, and air must be free to circulate around it. Therefore, the system should not be operated while inside the carrying and storage pack .

The video screen is a color active-matrix liquid crystal display (LCD) covered by a polarizing screen to improve viewing in bright light. A velcro attachable sun shade is also included with your system. However, even with the polarizing screen, the data can be difficult to view in bright sunlight. Turning the system so that the screen does not directly face the sun and using the sun shade will make the data easier to view. Sometimes it will be necessary to completely shade the unit in order to see the image on the screen.

**NOTE:**

The SIR-2 is designed to operate from 0°C (32°F) to 40°C (104°F). The SIR-2 control unit can operate in dusty, humid or foggy environments but it should not be deliberately subjected to direct rain or immersed in water.

Turning the system so that the screen does not directly face the sun and using the sun shade will make the data easier to view in bright sunlight.

The screen on the SIR-2 is plastic and susceptible to scratching. Reasonable care should be exercised in protecting the screen from sharp objects which may scratch it. Do not use

# CHAPTER 2: BASICS OF SYSTEM OPERATION

## 2.1 Hardware Connections

Only two simple connections need to be made before you can start the system.

1. The male end of the antenna control cable should be connected to the antenna connector on the SIR-2 control unit. The 11-pin connector at the other end of the control cable should be connected to a GSSI antenna. Because the control cable connector on the SIR-2 is different, older GSSI antenna cables will not connect directly to the control unit. You will need to connect the antenna cable provided with your SIR-2 system to the control unit and connect older GSSI antenna cables to that cable by connecting a cable adapter between the two cables.

**NOTE:**

If you are going to playback data, it is preferable not to connect the antenna to the SIR-2 before powering ON the system.

2. The male end of the DC power cable should be connected to the battery connector on the control unit.

The following connections are for optional items:

a) If a thermal printer is to be used, the male end of the thermal printer cable should be connected to the parallel connector of the control unit and the other end should be connected to the printer. See Chapter 6 for details on using thermal printers.

**⚠ CAUTION:**

If you connect a printer to the SIR-2, the printer must be powered ON before the SIR-2.

b) If a survey wheel is to be used, connect the survey wheel to the antenna.

**After all other connections have been made connect the power cable to the power source.** If the battery voltage is adequate, the green light above the power button will become illuminated and remain illuminated. If the battery voltage is low, the green light will flash. If the green light is flashing, you should correct the low voltage problem before starting the system.

- If an antenna is not connected to the system and you choose **Previous Setup,** the system will enter the PLAYBACK SETUP MENU block. See Chapter 5 for a description of the PLAYBACK SETUP MENU block. If you accidentally choose **Stored Setups**, press *Enter* ⏎ and then **Cancel**. The system will then enter the PLAYBACK SETUP MENU BLOCK.

Once in the COLLECT SETUP MENU block, data coming from the antenna will show on the top left ¾ of the screen, and oscilloscope display of the data in the top right ¼ of the screen and the bottom portion of the screen will show the COLLECT SETUP MENU block. Note that the data being acquired at this time is only displayed to the screen and it is **not** saved on disk.

**Review the remainder of Chapter 2 for a general description of how to use the system, then go to Chapter 3 for system data collection parameters setup.**

### *2.2.1 System Startup for the SIR-2P*

When the SIR-2P is turned on and goes through its boot routine, you will see a small window near the top of the screen that says: 1 or F1 Run SIR-2; 2 or F2, WIN95/RADAN. If you take no action for 30 seconds, the system will default to SIR-2 mode. When it boots into the SIR-2 mode, you will be given a choice of two modes of operation at the top screen: press **Run** for Automatic operation or press **Enter** for Standard operation.

Once in SIR-2 mode, if you want to switch to the Windows95 (WIN 95) mode you must turn the system OFF and reboot, then select option 2, **WIN95/RADAN**.

In WIN95 mode the system acts like a normal computer with the Windows 95 operating system. From here, you can launch RADAN or any other software that has been pre-loaded. To turn the system OFF in WIN95 mode, hold the power switch down for at least 8 seconds.

If you connect the SIR-2P to a network through the ethernet connection, the password to use is "sir2p".

## 2.3 Using The HELP Key To Get Help

Highlight any menu command and then press the ?(*Help*) ? key to get help on that command. Press the *Help* ? key and then the *Enter* ⏎ key to get general help on the system. Help for some commands is longer than one screen, and in these cases use the *Down* ↓ arrow key to obtain the additional screens of help.

**NOTE:**

General system help can be obtained by pressing the *Help* ? key and then the *Enter* ⏎ key. If at any time you are unsure of the current system parameter settings press the *Collect/Playback* key until the system parameters screen appears.



GMEI-00127

## 2.5 Navigating Through The User Menus

### *2.5.1 The Major Menu Blocks*

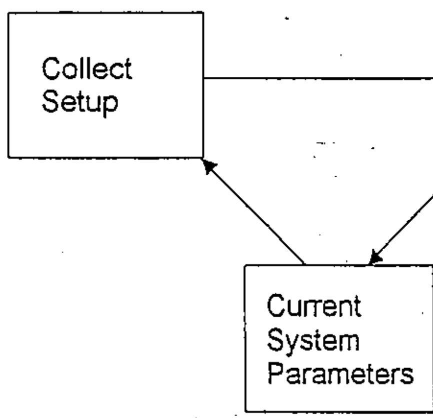
The SIR-2 has 4 major MENU blocks:

- COLLECT SETUP
- PLAYBACK SETUP
- PLAYBACK DATA
- COLLECT DATA

The system will identify which block is active by a message appearing in the lower portion of the menu block.

SETUP MENU BLOCKS

When the system is first turned ON, it is in Setup Mode. When in the SETUP MAJOR MENU block, pressing the *Collect/Playback* button cycles through the major menu blocks; COLLECT SETUP and PLAYBACK SETUP, and the Current System Parameters screen (Figure 2-1).




Cycling through the major menu blocks when in Setup Mode
by repeatedly pressing the *Collect/Playback* key
**FIGURE 2-1**

COLLECT DATA AND PLAYBACK DATA MENU BLOCKS

To put the system in Data Mode, press the *Run/Standby* key. This will start the system collecting data (**Note: By default the data will be stored in RAM. It will only be stored on the hard disk if you turn disk output ON. See Section 3.2.3**). In the Data Mode, pressing the *Collect/Playback* button cycles through the major menu blocks; COLLECT DATA and PLAYBACK DATA, the current system parameters screen and then the COLLECT SETUP MENU BLOCK (Figure 2-2).

- The middle columns consist of two types of system parameters: those whose values appear in a box and can be changed via the toggle switch method and those whose values can be changed by a parameter change box. When a parameter from these columns is highlighted and then the *Enter* key is pressed, one of two things will happen: If it is a toggle switch parameter, the value of the parameter will change each time *Enter* is pressed; if the parameter requires a wide range of values a parameter change box will appear as a third column. The *Up* and *Down* keys will be used to increment/ decrement value of the parameter by the step size; the *Left* and *Right* keys will allow you to select step size. The *Enter* key will set the selected value of that parameter.

**NOTE:**

Throughout the remainder of the manual when the expression "select a command" is used, it means move the highlight bar to illuminate that command and then press the *Enter* key. This will select (i.e., activate) that command.

Let's look at some examples of using the menus.

1) PLAYBACK SETUP menu block, if you highlight the **Files** command from the leftmost column a list of commands will appear in a second column.

2 Now, using the *Arrow* keys move to the second column and highlight the **Compress** command. A third column containing two compression commands appear, **Method** and **Do Compress**.

3) Finally, if you move the highlight bar to the **Method** command and press the *Enter* key three times slowly. Notice that this changes the type of compression method.

4) In the COLLECT SETUP MENU block move the highlight bar to the **Setup** command and then to the **Range** command. Notice that a parameter change box appears to the right. Move the highlight bar to the **Parameter Change** box to change the value of the range. Then press the *Enter* key to register the change.

## 2.6 Recalling Preset Files To Automatically Set The System For Data Acquisition

When the system is first turned ON or after switching antennas, the system can be easily set for data acquisition by selecting the operating parameters setup file that is most appropriate for the selected antenna and job. This is done using the **Recall Setup** command accessed from the **Setup** command in the COLLECT SETUP MENU block or the PLAYBACK SETUP MENU block. This command is next to the bottom of the second column of commands.

# CHAPTER 3: SYSTEM SETUP FOR DATA COLLECTION

## 3.1 Simple (Quick) System Setup For Data Collection

After loading the appropriate system operating parameters setup file (see Appendix A for a description of the setup files), the following few parameters should be checked to ensure that they are optimal for your specific site.

The system should be in the COLLECT SETUP menu block.

1) Check the **Range** (i.e., depth) of viewing.

This is done by moving the highlight bar up to the Range parameter. The appropriate range value is calculated by the following formula:

RANGE VALUE = Maximum Depth of Interest * T * 1.5

Where T is the two-way travel time of the subsurface materials at your site. For a table of two-way travel time values see the discussion of range in Section 3.2.2. After the range value is changed, the system will automatically find the position of the ground surface reflection and place it at the top of the data screen. It will also readjust the gains (the message "servo in progress, please wait" will appear, and the speaker will emit a "clicking" sound while this is occurring).

2) Check the position of the ground surface reflection.

Normally, the surface reflection will appear in the color bar at the top of the O-scope data display. Occasionally the system will misidentify a different reflection for the ground surface reflection. (It is especially prone to do this with the horn antennas, 1000 MHz antenna, 3200 MLF antenna, bistatic 100 MHz and the bistatic 300 MHz antenna.) In this case, the real surface reflection will occur before the top of the signal (as displayed in the O-scope display). Move the highlight bar down until the **Position** command is highlighted and press the *Enter* ⏎ key to change position to Manual Mode. Move to the parameter change box and use the *Down* ↓ arrow to decrease the position value by 5ns if the range is less than 20ns, by 10ns if the range is between 20ns and 100ns and by 50ns if the range is greater than 100ns. (Note that when changing the position value the system will often round off values.) Before you change the position value you should note the original value. Press the *Enter* ⏎ key to implement the position change.

After changing the position value, you will observe one of two things:

1) If the oscilloscope display shows the data is flat (no signal) at the top and a strong surface reflection appears further down, the system correctly found the surface reflection. Move the highlight bar to the **Parameter Change** box again and set the position value back to the original number before you changed it.

2) If the data is not flat at the top of the record the wrong surface position was found. You should keep manually decreasing the surface position by increments of 5 or 10ns

## 3.2 Complete Description Of Collect Setup Menu Block

SETUP

When this command is highlighted, a set of system data collection parameters that can be set appears in the second column. The commands that will appear in the second column are: Setup Mode, Run Mode, Range, Gain, Position, Filters, Scan, Save Setup, Recall Setup, and Show Setup.

SETUP MODE

This parameter determines how the system parameters will be set. There are two setup modes: Automatic and Manual. The mode is changed by pressing the *Enter* ⏎ key.

When the Setup Mode is set to **Automatic**, the system will automatically find the ground surface reflection and place it at the top of the screen, set the filters, gains, scan speed and data resolution. It will not automatically set the range. The range used will be that which is set prior to putting the system in Automatic Mode. After automatic setup the user can manually change any system settings.

When the Setup Mode is set to **Manual**, the user can manually set all system parameters to the desired settings.

**⚠ CAUTION:**

When the Setup Mode is set to **Auto**, the Gain Position, Filters and Scan Parameters will be hidden.

### *3.2.1 Setting The Data Acquisition Method*

RUN MODE

This parameter informs the system how the field survey will be conducted. There are three methods of data acquisition: Cont (continuous), Point and SW (survey wheel). The system Run Mode is changed using the *Enter* ⏎ key.

CONTINUOUS DATA COLLECTION METHOD

When the Run Mode is set to **Cont** (Continuous), the system is continuously transmitting signals into the ground and recording data. The advantages of this mode are that a continuous profile of the subsurface is generated and it is the most rapid data collection method.

SURVEY WHEEL CONTROLLED DATA COLLECTION METHOD

When the Run Mode is set to **SW** (Survey Wheel), a third column of survey wheel data collection parameters appears. In this mode data collection is controlled by a survey wheel attached to the antenna. All lines will then have the same horizontal scaling. This mode is preferable for surveys which require precise line locations.

1) Choose a survey wheel calibration line that is at least 50% as long as your maximum survey line. Enter the distance of the survey calibration line in the distance parameter.
2) Select the survey units either meters or feet.
3) Set the antenna at the beginning of your survey calibration line with the middle of the antenna on the beginning of the line.
4) Activate the **Autocalibrate** function by pressing the *Enter* key and then the *Run/Standby* key.
5) Move the antenna over the survey calibration line very slowly (less than 0.5meters (1.5ft) per second), until the middle of the antenna reaches the end of the survey calibration line.
6) When finished calibrating, press the *Run/Standby* key to end the calibration.
7) Your survey wheel is now calibrated and ready for use.

UNITS

Use the *Enter* key to select the survey units **Meters** or **Feet.**

DISTANCE

Enter the distance of the survey wheel calibration line. The distance should be at least 50% of the longest line in the survey to be performed.

TICK/UNIT

If you know the number of electronic ticks per meter or feet that your survey wheel will send to the SIR-2 system, you can enter the number here. With this number it is not required to calibrate the survey wheel. We strongly recommend using the Autocalibrate function instead of entering a tick/unit value, because ground conditions change and when the system is Autocalibrated it will take this into account to some extent.

**DISCRETE DATA POINT DATA COLLECTION METHOD**

When the Run Mode is set to **Point,** the parameter Stat Stack appears in the third column. When in Point Mode, data is collected a predetermined number of scans per survey station (i.e., every time the *Run/Standby* key is pressed another number of scans are collected). This mode is useful in rough terrain where continuous data collection is impossible and in areas where the signal is very weak at deep depths and maximum signal enhancement is required. When using Point Mode, it is recommended that Wiggle Display Mode be used.

Be aware that the display shows a simulated stack while in Collect Setup. The system shows the actual stack when switched to Run Mode and you start acquiring data.

STAT STACK

In order to improve signal-to-noise in Point Mode, it is advantageous to stack (i.e., average) several input scans into one output scan at each station. The Stat Stack parameter allows you to set the number of scans that will be averaged. The value is typically set to 32, and the range is from 1 to 32768 in binary steps. Thus, when the value is set to 32 at each station, 32 scans will enter the system from the antenna and be summed

| Material | T (ns/meters) | T (ns/feet) |
|---|---|---|
| Air | 6.5 | 2 |
| Ice | 13 | 4 |
| Snow | 8 | 2.5 |
| Water | 59 | 18 |
| Asphalt | 14 | 4.5 |
| Dry concrete | 15 | 4.5 |
| Wet concrete | 23 | 7 |
| Dry sands | 13 | 4 |
| Wet sands | 25.5 | 7.5 |
| Saturated sands | 33 | 10 |
| Dry sand & gravel | 15.5 | 4.5 |
| Frozen sand & gravel | 14.5 | 4.5 |
| Dry loamy/clayey soils | 10.5 | 3 |
| Dry mineral/sandy soils | 16 | 5 |
| Organic soils | 52.5 | 16 |
| Wet sandy soils | 32 | 9.5 |
| Frozen soil/permafrost | 16 | 5 |
| Tills | 22 | 6.5 |
| Peats | 51.5 | 15.5 |
| Wet clay | 34 | 10.5 |
| Dry clay | 13 | 4 |
| Dry granite | 14.5 | 4.5 |
| Wet granite | 16.5 | 5 |
| Wet basalt | 19 | 6 |
| Volcanic ash | 23.5 | 7 |
| Potash ore | 15. | 4.5 |
| Dry bauxite | 33 | 10 |
| Syenite porphyry | 16 | 5 |
| Travertine | 18.5 | 5.5 |
| Coal | 14 | 4 |
| Dry limestone | 15.5 | 4.5 |
| Wet limestone | 18.5 | 5.5 |
| Wet sandstone | 16 | 5 |
| Dry salt | 16 | 5 |

*Approximate* two-way travel time values of various materials
TABLE 1

**NOTE:**

When manually adjusting the gain curve, if the gains are set correctly, the largest signals (reflections) in the oscilloscope display should be 75% the width of the display and the data screen should show mostly (60% to 80%) red, orange and yellow reflections. The colors described above are based on color table 2. If you use a different color table the correct gain colors will be different.

GAIN POINTS

The number of gain points can be set from 1 to 8, and is normally set between 3 and 5. You may want to use fewer gain points (2 or 3) for shallow scans (5-15ns) made with our high-frequency, high resolution antennas for detecting steel reinforcing bars or mesh in concrete. Conversely, you may want to use more gain points (6 or 8) to allow greater adjustment flexibility when doing deep investigations (200-1000+ns).

POSITION

This parameter controls the vertical position of the surface reflection in the data viewing window. The surface reflection is the place in time where the radar pulse leaves the antenna, and enters the subsurface. It can therefore be considered to be "time zero", and its position should be at the top of the scan. When **Position** is set to Auto Mode, the system will attempt to identify the surface reflection and place it at the top of the data viewing window. The surface reflection is always a very strong reflection. The gain parameter should be set to **Auto** when using the Auto Position.

Note that the ability of the system to correctly identify the surface reflection depends upon the antenna selected and the ground conditions. It is important to check that the system has correctly identified the surface reflection. This is done by manually moving the scan down the viewing window by decreasing the range by a few nanoseconds. If the Auto Position has correctly identified the surface reflection, these data should be a nearly flat line (no signal) at the top of the scan above the surface reflection as you move the scan down the viewing window. If, as the scan is moved down the viewing window, more data appears above, then the Auto Position has not found the surface reflection. You should continue to move the scan down the window until the data becomes a nearly flat line at the top of the screen. The large reflection just below the flat data zone will be the surface reflection. The gain should be set to **Manual** when manually adjusting the scan position.

To manually move the data scan up or down in the window, set Position to **Manual**. A fourth column will appear which will allow you to move the scan. The Step parameter controls how much the scan is moved up and down and is changed using the *Right* → and *Left* ← arrow keys. Use the *Up* ↑ arrow key (increase time in ns) to move the data scan up in the window, and use the *Down* ↓ arrow key (decrease time in ns) to move the data scan down in the window. Gain should be set to **Manual** when manually adjusting the position. When using Manual signal position, keep the gains at a minimum when searching for the transmit pulse.

surveys this filter should be set no greater than 5. If you are looking for very small objects in the near subsurface (like wire mesh reinforcing in concrete), you should turn this filter off by setting it to zero. For subsurface layer mapping, the value of this parameter may be increased but is normally less than 20.

HOR BKGR RM

The Hor Bkgr RM (horizontal background removal) filter is used to improve the recognition of small targets and dipping reflectors.

This process filters the data horizontally by removing horizontal noise bands and reflecting layers. This filter **SHOULD NOT** be used in Data Collection Mode because it removes the surface reflection and any other real horizontal reflections.

When this parameter is highlighted, a fourth column appears. The input value is number of **Scans.** This is an IIR (infinite impulse response) running average subtraction filter. The filter works by taking an average of the data and subtracting the average from each scan. The smaller the selected filter value the more effect the filter has.

This filter is best used in playback when looking for point targets and there are significant horizontal noise bands. Use the *Cursor* to measure the width in terms of the number of scans of the largest point target and set the Hor Bkgr RM filter to this value. The filter will remove all horizontal banding that is equal to or longer than the set value of this parameter, provided there is no change in amplitude or depth of these horizontal signals.

SCAN

This menu item sets the parameters of the data scans. These parameters are samples/ scan, bits/sample and scans/second. **Scan** can be set to **Auto** (automatic) or **Manual** using the *Enter* ⏎ key.

When in Auto Mode, the parameters are automatically set by the system. The samples/ scan will be set to 512, the bits/sample to 8 and the scans/second to 32, unless factory setups have been chose. In this case, the samples/scan and bits/sample may differ.

When in Manual Mode, the parameters, samples/scan, bits/sample and scans/second appear in the third column. The user can now manually set these parameters.

SAMP/SCAN

This parameter sets the number of data samples in a vertical scan. When it is highlighted, a fourth column appears which allows you to change the value of the parameter. The samp/scan can be set to 128, 256, 512, 1024, or 2048.

This value is normally set to 512 samples/scan which is the best value for most applications. However, for each antenna frequency there is a maximum value that the range should be set when recording 512 samples/scan and occasionally you may wish to set the range beyond this value. In this case you must increase the samples/scan to a higher value, otherwise your data will be under-sampled or aliased (i.e., resolution will be lost).

This maximum permissible range when recording 512 samples/scan is calculated by the following formula:

| SAMPLESSCAN SETTING | SCANS/SECOND CHOICES |
|---|---|
| 128 | 16,24,32,48,64 |
| 256 | 16,24,32,48 |
| 512 | 16,24,32 |
| 1024 | 16,24 |
| 2048 | 16 |

The normal setting is 32 scans/second. When surveying on foot at approximately 1 meter (3 feet) per second, a setting of 32 scans/second will result in a data scan about every 3 cm (1 inch) along the ground surface. If you wish to increase your scan density, you should walk slower. For example, a walking pace of 60 cm (2 feet) per second will result in a data scan approximately every 2 cm (1 inch) along the ground surface.

Often for large scale surveys (i.e., bedrock mapping), a coarser horizontal sampling is desired (ex. scans every 20 cm (8 inch)). In such cases, the scans/second value can be lowered to 24 or 16. This will result in smaller files, saving disk space and speeding up data transfer and post-processing.

Sometimes surveys are done pulling antennas with a vehicle at a higher rate of speed (ex. 2-5 meters (6-15 ft) per second). If a setting of 32 scans/second does not provide adequate horizontal sampling, you may increase the scans/second setting to 48 or 64. Note that scans/second settings of 48 and 64 are generally only available when the samples/scan are set to 128 or 256.

### 3.2.3 Setup Of Disk, Printer And Display Output Parameters

OUTPUT

When this command is highlighted, the Output Setup commands appear in the second column.

Pressing the *Enter* ⏎ key when **Output** is highlighted will have no effect.

DISK

The hard drive storage device can be operated by highlighting the word **Disk** in the menu in the second row and toggling the **Disk On** or **Off** with the *Enter* ⏎ key. If **Disk On** is selected, data will be stored to the hard disk, and the message "Out:D" will appear in the lower right corner of the screen. Each filename consists of the word FILE + a number (ex. FILE8), where the number increments for each file saved.

PRINT

This function turns the print output ON or OFF by using the *Enter* ⏎ key. When it is turned ON, a third column of printer control commands appears. If the printer is not connected and turned ON, there will be a long delay ( about a minute) when this parameter is selected.

PRINTER

Use this command to select the printer you will be using to print the data. The *Enter* ⏎ key is used to toggle between the two selections, the GS-608P and the DPU5400.

The Linescan color display is the best display for most applications, especially good for identifying buried point targets (ex. drums, voids, pipes). The Linescan grayscale display is a good display to identify buried pipes. The Linescan color or gray shade displays are also good for displaying geologic layering. You should try different Linescan color and grayscale displays of the same data sets to determine which displays help you best with the interpretation.

Wiggle displays are sometimes better for interpreting layering in stratigraphic or geological surveys over long distances.

Oscilloscope display allows viewing of a single radar trace in detail.

## LINESCAN DISPLAY PARAMETERS

### COLOR TABLE

This parameter sets the Color (or gray scale) Table to be used to display the data. There are 15 possible Color Tables from which to choose. The *Enter* ⊖ key is used to change the Color Table by toggling through the choices. The active Color Table is shown in the upper right hand corner of the SIR-2 screen, above the oscilloscope display.

Each Color Table consists of 16 colors, eight colors to represent positive amplitudes and eight colors to represent negative amplitudes. Each data point in a scan is represented by a color or gray shade depending upon its value. For example, using Color Table 2 low amplitude data values will show as black, high positive amplitudes as white and high negative amplitudes as gray. Thus, each scan results in a vertical line of colored (or gray shaded) dots on the SIR-2 screen. As each scan is collected by the system, the screen fills with vertical colored (or grayscale) lines to generate a profile image of the subsurface.

The Linescan color display is a good display for most applications, but it is especially good to identify buried point targets (ex. drums, voids, pipes). The Linescan grayscale display is a good display to identify buried pipes.

### COLOR XFORM

This parameter sets the Color Xform (i.e., Transform) to be used to display the data. There are 8 possible Color Transforms from which to choose. The *Enter* ⊖ key is used to change the transform. The active Color Transform is shown in the upper right hand corner of the SIR-2 screen.

The Color Transform determines whether the color scale applied to the radar signal's amplitude is linear, logarithmic, or exponential. This function can also be used to de-emphasize certain features. For example, in a logarithmic display, all low amplitude signals are assigned into a "compressed" lower color range, and the range of high amplitude signals is extended. If white represents a high amplitude signal, then there will be more white area for a given data set than a linear transform. Transforms 2 and 3 are used to emphasize weak reflections, and Transforms 4 and 5 are used to emphasize high amplitude reflections.

During system setup you should always use Color Xform 1, **which is linear**. Though not required, we recommend using Color Xform 1 when collecting data.

WIGGLE AND O-SCOPE DISPLAY PARAMETERS

SCALE

The scaling parameter defines the number of vertical lines used to represent each wiggle. The larger the scale value, the larger the wiggle representation.

In O-Scope Mode, the scaling parameter defines the section of the amplitude scale observed. When Scale is 1, the full amplitude scale is shown. When Scale is 2, only the bottom 50% of the amplitude scale is shown. When Scale is 3, only the bottom 30% of the amplitude scale is shown, etc. Increasing the Scale parameter allows one to progressively zoom in on the scan.

HOR SCALE

This parameter controls the Horizontal Scale labeling when in O-Scope Display Mode. The Horizontal Scale can be set to Time, Depth or None. If **None,** no horizontal scale will be printed in the Wiggle Mode, but a time scale will be printed in O-Scope Mode. If set to **Time,** the horizontal scale will be two-way travel time in nanoseconds.

If set to **Depth,** the horizontal scale will be in meters below the surface. Note that the depth scale is only approximate, based on the ASSUMED dielectric constant of the subsurface. See the DIEL parameter help for details.

SPACE

The spacing parameter sets how many vertical lines to move before printing the next wiggle. The higher the spacing value, the larger the spacing between wiggles.

STACK

The stacking refers to the number of incoming scans to stack for printing and display. This stacking does not apply to the recorded data. For example, a stack=4 will stack incoming scans into one (1) output scan for printing and display.

SKIP

Skip refers to the number of scans to skip for printing and display. This will have no effect on the scans recorded. For example, a skip=1 will skip every other scan for printing and display. A skip of 2 will print a scan, skip two scans and print the next scan.

## 3.3 Saving The System Parameter Settings For Future Use

After setting up the system operating parameters, you may wish to save the setting for future use. This is done by using the **Save Setup** command accessed from the **Setup** command in the COLLECT SETUP MENU block or the PLAYBACK SETUP MENU block. This command is at the bottom of the second column of commands.

SAVE SETUP

This command allows you to save all of the current system settings into a setup file. This file can then be recalled any time in the future and the system will be set to the current

# CHAPTER 4: DATA COLLECTION

## 4.1 Preparing For Data Collection

After setting the operating system parameters, either automatically (see Sections 2.6 and 3.1) or manually (see Chapter 3), you are ready to collect data. As a reminder, we have listed below three critical parameters that you should verify:

- Is the **Disk Output** set to ON?
- Have you selected the correct Run Mode, either **Cont** (continuous), **SW** (survey wheel) or **Point** (point collection)? If you are using a survey wheel, has it been calibrated?
- If you are going to print data real-time, have you selected the correct printer and set **Print** to ON?

The COLLECT DATA MENU block is entered by pressing the *Run/Standby* key. What you see on the screen will depend upon the Run Mode you set.

- If the Run Mode is set to **Cont** (continuous), the system will begin collecting data and it will show across the screen. The file and scan number will appear in the lower right corner of the screen.
- If the Run Mode is set to **SW** (survey wheel), a scan will appear on the left end of the screen and the rest of the screen will remain blank until you begin to move the antenna/survey wheel.
- If the Run Mode is set to **Point** ( point collection), a scan will appear on the left end of the screen. The rest of the screen will remain blank until you press the *Run/Standby* key or the marker to begin collect the next data point or survey station.

Section 4.2 describes continuous data acquisition and the parameters in the COLLECT DATA MENU block.

Section 4.3 will describe operation in the survey wheel controlled method and Section 4.4 will describe operation with the discrete data point method.

**NOTE:**

All users should read section 4.2.

## 4.2 Continuous Data Collection Method

The antenna is pulled continuously across the ground and the SIR-2 collects data at the number of scans per second selected. The data collection rate is independent of the speed at which the antenna is pulled. The resulting subsurface profile is referenced to a ground



GMEI-00139

2D GRID

This function is not operational at this time.

When 2d Grid is operational, this parameter is the line number that will be entered into the file header for the next line of data to be acquired.

STARTP

When 2d Grid is operational, this parameter is the Y coordinate value for the starting point of the line.

ENDP

When 2d Grid is operational, this parameter is the Y coordinate for the ending point of the line.

MARK INTVL

When 2d Grid is operational, this parameter is the Y coordinate interval between marker (survey grid) locations along the line.

STEP

For the parameter shown in the box above, this is the increment that will be used when changing the value of the parameter.

After the desired value of the parameter is set, press the *Enter* key to register that value in the system.

SELECT BLOCK

This command is used to select a block of data for printing or saving to disk. The block of data selected can be more than one screen size. When this command is selected, the command menu will disappear from the screen and a vertical line (cursor) will appear in the middle of the screen. Move the cursor using the *Right* and *Left* arrow keys until it is on the first (leftmost) scan of the block of data you want to select. Press the *Down* arrow key to select the beginning of the block. Now, using the *Right* arrow key, move the cursor until it is on the last (furthest to the right) scan of the block of data you wish to select. As you move the cursor, a cross-hatched diagonal highlighted area will appear over the data that will be selected. Press the *Up* arrow key to complete the selection. Press the *Print* key to print the selected data block. Press *Enter* and then select **Dump To File** to save the selected block in a file. If **Disk On** is selected, data will be stored to the file with name FILENAME+L (a letter A-Z will be appended to the original file name), otherwise a file name with a number greater than the last file number recorded will be created. Press the *Enter* key to exit the **Select Block** function.

DUMP TO FILE

This command enables you to save a selected block to a separate data file. After a block of data has been selected, highlight the **Dump To File** command and press *Enter*.

that station. Continue this collection technique until the end of the survey line. To stop collecting data at the end of a survey line press the *Run/Standby* key and hold for 2 seconds at the last station. This will close the file and the system will be ready for the next survey line.

**NOTE:**

The antenna marker switch cannot be used to close the data file at the end of a line in point mode. You must use the *Run/Standby* key to close the file in this mode. This is done by holding the *Run/Standby* key depressed for 2 seconds at the last station on the line.

# CHAPTER 5: DATA PLAYBACK AND REVIEW

Selection of files to playback and setup of system display, processing and output during playback are done in the PLAYBACK SETUP MENU block. Playback of data already collected and stored on the disk is done via the PLAYBACK DATA MENU block.

## 5.1 Playback Setup Menu Block

This block is entered when the system is powered ON without an antenna, or from the PLAYBACK DATA MENU block by entering the **Setup** command. It is entered from the COLLECT SETUP MENU block by pressing the *Collect/Playback* key.

### *5.1.1 Setup For Processing Of Playback Data*

During playback, Gains, Horizontal Filters and Vertical Filters can be applied to the data to improve interpretation.

SETUP

When this command is highlighted, a set of playback processing parameters that can be set appears in the second column. The commands that will appear in the second column are; **Processing, Play All, Save Setup, Recall Setup,** and **Show Setup.**

Pressing the *Enter* key when **Setup** is highlighted will have no effect.

When **Processing** is highlighted, the following options appear in a menu box to the right:

GAIN

This function is used to apply an additional gain constant to the data files as they are played back to the system or transferred to a computer. You can apply this gain if the data acquired is too low in amplitude and difficult to interpret.

Activating this function will cause a parameter setup box to appear to the right. Use this box to adjust the value of the gain to be applied.

When setting the values of the gain, the *Up* arrow is used to increase the value of the parameter and the *Down* arrow is used to decrease the value of the parameter. The *Right* and *Left* arrows are used to increase or decrease the increment when setting the gain values. The gain values are in units of decibels (dB). Every 6 decibel increase is equivalent to doubling the amplitude of all points in the signal.

SHOW SETUP

Displays the current system setup parameters.

### *5.1.2 Data Display And Printing During Playback*

There are three types of displays available during playback, Linescan, Wiggle and O-Scope. These displays can be printed during playback on the DPU-5400 (Seiko Model DPU5400 4" thermal plotter) or the GS-608P (OYO Model GS-608P 8" thermal plotter).

OUTPUT

When this command is highlighted, the output setup commands appear in the second column. Pressing the *Enter* ⏎ key when **Output** is highlighted will have no effect.

PRINT

This function turns the print output ON or OFF by pressing the *Enter* ⏎ key. When it is turned ON, a third column of printer control commands appears.

DISK

Disk ON writes the playback file to the hard drive and appends a letter to the filename each time the file is saved.

XFER

See Section 7.3.1.

PRINTER

Use this command to select the printer you will be using to print the data. The *Enter* ⏎ key is used to toggle between two selections, the OYO Model GS-608P 8" thermal plotter, and the Seiko Model DPU5400 4" thermal plotter. Make sure the printer cable is connected and the printer turned ON before selecting the printer.

The maximum real-time scan rate when printing is 32 scans/sec.

HORIZONTAL ZOOM

This parameter stretches the data printout in the horizontal direction. The possible values are 1, 2, 3, or 4 and the *Enter* ⏎ key is used to change the value.

A value of 1 means that each scan of a data file is printed as one scan on the printer. A value of 2 means that each scan of a file is output as 2 duplicate scans on the printer. A value of 3 means that each scan of file is output as 3 scans on the printer and a value of 4 means 4 scans are printed for each scan in a data file.

When in Linescan Mode the DPU5400 and the GS-608P print 200 and 203 scans per inch respectively. The SIR-2 video display displays 94 scans per inch. The Horizontal Zoom setting of 2 will give the best match between the aspect ratio of the video screen and that of the printout.

ORIENTATION

This parameter controls the orientation of the data as it is printed on the paper. The orientation can be Normal or Flipped and is changed by pressing the *Enter* ⏎ key.

data with multiple colors, with Color Xform 5, which emphasizes the high data amplitudes and will decrease the amount of color representing the data.

During system setup you should always use Color Xform 1 (linear). We also recommend using Color Xform 1 when collecting data.

During data playback Color Xform 2 is useful when viewing low amplitude regions and Color Xform 4 is useful when the objective is to see only high amplitude targets (i.e., metal, or voids).

VERT SCALE

This parameter controls the vertical scale labeling. The vertical scale can be set to Time, Depth or None. If **None** is selected, no vertical scale will be printed. If set to **Time,** the vertical scale will show two-way travel time in nanoseconds.

If set to **Depth,** the vertical scale will display meters below the surface. Note that the depth scale is only approximate, and based on an *assumed* dielectric constant value for the subsurface. See the Diel parameter help for details.

DIEL

This parameter is the value of dielectric constant used to convert two-way travel time to depth. The value can range from 1 to 81 or more and varies greatly with electrical and physical properties of the subsurface materials. Note: The default dielectric value for a depth scale is 1. Be sure to select an appropriate dielectric value before collecting/playing back data.

WARNING: Dielectric constant values for various materials and the resulting depth scales are only approximations. For a description of methods for estimating the dielectric constant of the subsurface at your site, see your training notes.

Approximate dielectric constants for various common materials follow:

SPACE

The spacing parameter determines how many vertical line spaces to skip before printing the next wiggle. The higher the spacing value, the larger the spacing between wiggles. This function will have the effect of lengthening a radar profile.

STACK

Stacking refers to the number of incoming scans to stack (add) for print and display purposes only. Stacking does not apply to the recorded data. For example, setting Stack = 4 will stack 4 incoming scans into one (1) output scan for printing and display. This function will have the effect of shortening a radar profile.

SKIP

Skip refers to the number of scans to skip for print or display purposes only. This will have no effect on recorded data. For example, a Skip = 1 will skip every other scan for printing and display. A Skip of 2 will print (display) a scan, skip two scans and print (display) the next scan. This function will have the effect of shortening a radar profile.

### *5.1.3 Selecting Files For Playback*

Activate the **Files** command and then from the second column choose **Select** or **Select All** (the **Select All** command is at the bottom of the second column). The **Select** command allows you to choose individual files or groups of files to playback. This is accomplished by highlighting the file or files you want to playback with the cursor, and then pressing the *Enter* key. This action will place a box around the file(s) you have selected, and the SIR-2 will play them back when the *Run/Standby* is pressed. The first time the *Run/Standby* key is pressed, the file header will be displayed. The second time the *Run/Standby* key is pressed, the file will play back. If the file is longer than one screen, you can scroll back and forth through the file using the *Right* and *Left* arrow keys. The **Select All** command will select all files on the disk for playback.

## 5.2 Playback Data Menu Block

This block is entered from the COLLECT DATA MENU block by pressing the *Collect/ Playback* key. It is entered from the PLAYBACK SETUP MENU block by pressing the *Run/Standby* key.

REVIEWING THE CURRENT DATA FILE BY SCROLLING

If the current data file size is greater than one screen, the data file (up to the limit of system memory) can be reviewed using the SIR-2 scroll capability. Press the *Run/Standby* key to put the system in Standby. Use the *Right* arrow key to view data to the left of the current data screen and use the *Left* arrow to view data to the right of the current data screen.

the cursor until it is on the last (right-most) scan of the block of data you wish to print. As you move the cursor, a cross-hatched diagonal highlight box will appear over the data that you select. Press the *Up* arrow key to input the end of the block you are interested in. Press the *Print* key to print the selected data block, or use the **Dump To File** command to save the selected block into its own file. If **Disk On** is selected, data will be stored to the file with name FILENAME+L (a letter A-Z will be appended to the original file name), otherwise a new file name with one higher number than the last file name will be created. Press the *Enter* key to exit the **Select Block** function.

DUMP TO FILE

This command enables you to save a selected block to a separate data file. After a block of data has been selected, highlight the **Dump To File** command and press *Enter*.

DROP MENU

This command will cause the command menu to disappear, allowing the bottom of the data to be viewed.

GO TO SETUP

When the system is in the Collect Data Mode, selecting this command will put the system in the collect setup mode. When the system is in the Playback Data Mode, selecting this command will put the system in the Playback Setup Mode.

**APPENDIX A**

**SITE SURVEY FORM**

SURVEY FORM

Date: ____________
Time: ____________
Inspector: ____________

| | |
|---|---|
| Age of Building & Present Use | |
| Previous Use of Building | |
| Type of Sewer System (sewer or sanitary) | |
| Type of Heat (oil, natural gas, or electric) | |
| Storage Tanks (location, capacity, consumption) | |
| Additional Material Use & Storage | |
| Wastes Entering, Generated On, or Leaving Site | |
| Past Spill Incidents (location, contaminants) | |
| Asbestos Survey | |
| Location of Tanks | |
| Location of Floor Drains | |
| Location of Dry Wells | |

**APPENDIX B**

**GEOPROBE SYSTEM INFORMATION**

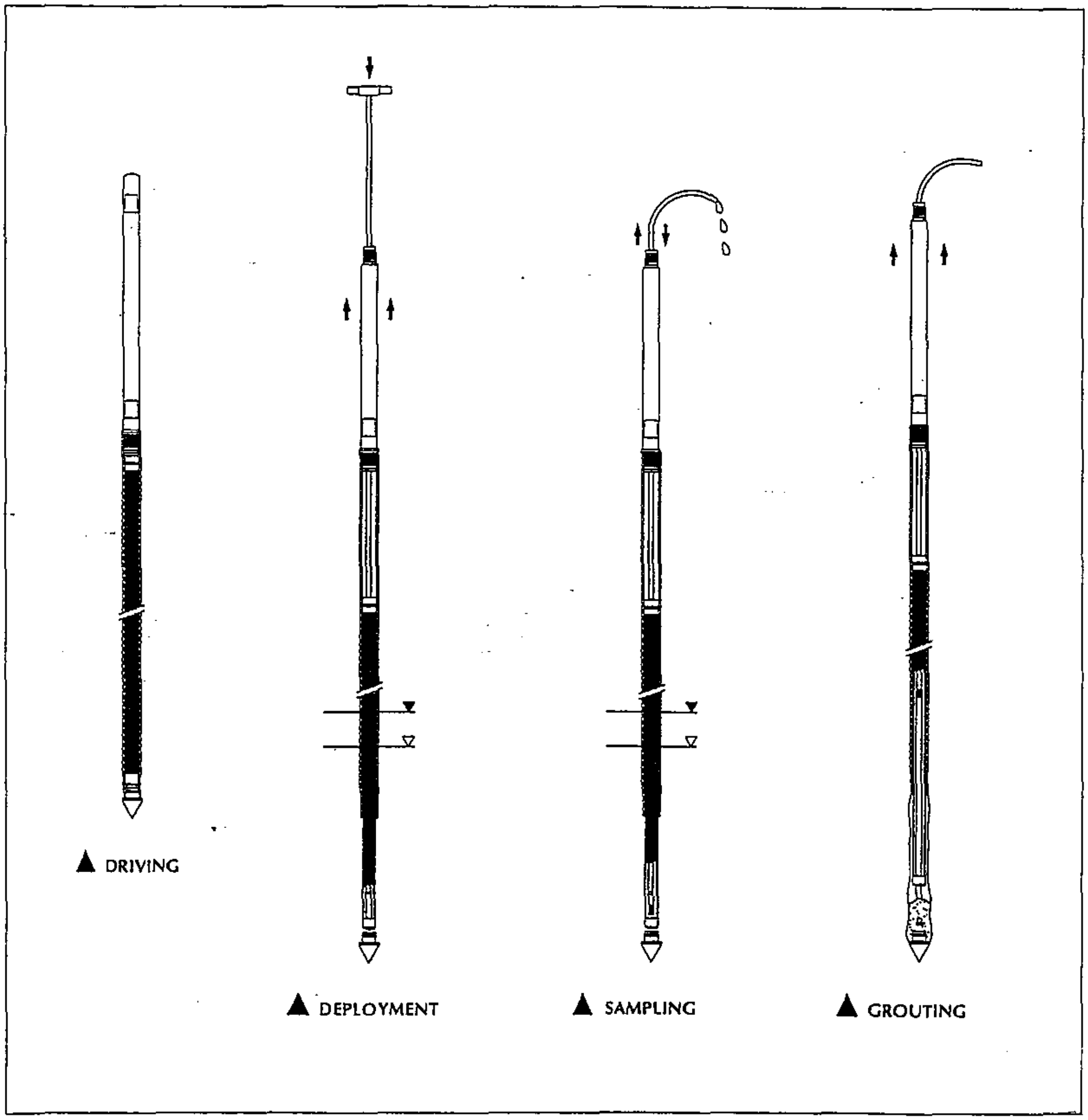
# Geoprobe Screen Point 15 Groundwater Sampler

## Standard Operating Procedure

Technical Bulletin No. 95-1500

PREPARED: October, 1995

REVISED: September, 1997




GEOPROBE SCREEN POINT 15 GROUNDWATER SAMPLER

GMEI-00150

Geoprobe® Systems

A DIVISION OF KEJR ENGINEERING

**Geoprobe® is a Registered Trademark of
Kejr Engineering, Inc., Salina, Kansas
Screen Point 15 Groundwater Sampler manufactured
under U.S. Patent 5,612,498**

## 1.0 OBJECTIVE

The objective of this procedure is to drive a sealed stainless steel or PVC screen to depth, deploy the screen, obtain a representative water sample from the screen interval, and grout the probe hole during abandonment. The Screen Point 15 Groundwater Sampler enables the operator to conduct abandonment grouting that meets American Society for Testing and Materials (ASTM) Method D 5299 requirements for decommissioning wells and borings for environmental activities (ASTM 1993).

## 2.0 BACKGROUND

### 2.1 Definitions

**Geoprobe®:** A brand name of high quality, hydraulically powered machines that utilize both static force and percussion to advance sampling and logging tools into the subsurface. The Geoprobe brand name refers to both machines and tools manufactured by Geoprobe Systems, Salina, Kansas. Geoprobe tools are used to perform soil core and soil gas sampling, groundwater sampling, soil conductivity and contaminant logging, grouting, and materials injection.

**Screen Point 15 Groundwater Sampler:** A direct push device consisting of a PVC or stainless steel screen that is driven to depth within a sealed, steel sheath and then deployed for the collection of representative groundwater samples. The assembled Screen Point 15 Sampler is 52 inches (1321 mm) long with an OD of 1.5 inches (38 mm). Upon deployment, up to 41 inches (1041 mm) of screen can be exposed to the formation.

**Casing Puller:** An assembly which makes it possible to retract the sampler string with extension rods protruding from the top of the probe rods. For units originally equipped with the GH40 Soil Probing Hammer, a Casing Pull Kit is available as part number GW4600K. Units originally equipped with the SK58 hammer, or retrofitted with the GH40 hammer require a different casing pull kit. Contact Geoprobe Systems for specific information.

**Rod Grip Pull System:** An attachment mounted on the GH40 Soil Probing Hammer which makes it possible to retract the sampler string with extension rods protruding from the top of the probe rods. The rod grip pull system utilizes hammer support brackets which greatly enhance probe unit durability. This system is therefore preferred over the Casing Pull Kit. The Rod Grip Pull System for use with 1.0- and 1.25-inch probe rods is available as GH1250K.

### 2.2 Discussion

In this procedure, the assembled Screen Point 15 Groundwater Sampler (Fig. 2.1A) is threaded onto the leading end of a Geoprobe probe rod and driven into the subsurface with a Geoprobe soil probing machine. Additional probe rods are subsequently added and driven until the desired sampling interval is reached. While the sampler is driven to depth, O-ring seals at the drive head and expendable drive point provide a watertight system. This system eliminates the threat of formation fluids entering the screen before deployment and assures sample integrity.

Once at the desired sampling interval, extension rods are sent downhole until the leading rod contacts the bottom of the sampler screen. The tool string is then retracted approximately 44 inches (1118 mm) while the screen is held in place with the extension rods (Fig. 2.1B). As the tool string is retracted, the expendable point is released from the sampler sheath. An O-ring on the screen head maintains the seal at the top of the screen. As a result, any liquid entering the sampler during screen deployment must first pass through the screen. The tool string and sheath may be retracted the full length of the screen or as little as a few inches if a small sampling interval is desired.

The Screen Point 15 Sampler utilizes either a stainless steel screen with a standard slot size of 0.004 inches (0.10 mm) or a PVC screen with a standard slot size of 0.010 inches (0.25mm). Both screen have an exposed length of 41 inches (1041 mm). Alternate slot sizes and lengths may be custom ordered. Contact Geoprobe Systems for available options. The screens are constructed such that a check valve or mini-bailer can be inserted into the screen cavity. This makes direct sampling possible from anywhere within the saturated zone. A removable plug in the lower end of the screens allows the user to grout as the sampler is extracted for further use.

Groundwater samples can be obtained in a number of ways. The most common method utilizes polyethylene or Teflon® tubing and a Tubing Bottom Check Valve (GW42). The check valve (with check ball) is attached to one end of the tubing and inserted down the casing until it is immersed in groundwater. Water is pumped through the tubing and to the ground surface by oscillating the tubing up and down. If oscillating the tubing is undesirable (such as when sampling for volatiles analysis), lower the check valve and tubing to the bottom of the sampler without the check ball. Then drop the check ball into the tubing from the ground surface. The ball will seat in the check valve and trap the sample in the tubing. Collect the sample by withdrawing and draining the tubing.

An alternative means of collecting groundwater samples is to attach a peristaltic or vacuum pump to the tubing. This method is limited in that water can be pumped to the surface from a maximum depth of approximately 26 feet (8 m). Another technique for groundwater sampling is to use a stainless steel Mini-Bailer Assembly (GW41). The mini-bailer is lowered down the inside of the casing below the water level where it fills with water and is then retrieved from the casing.

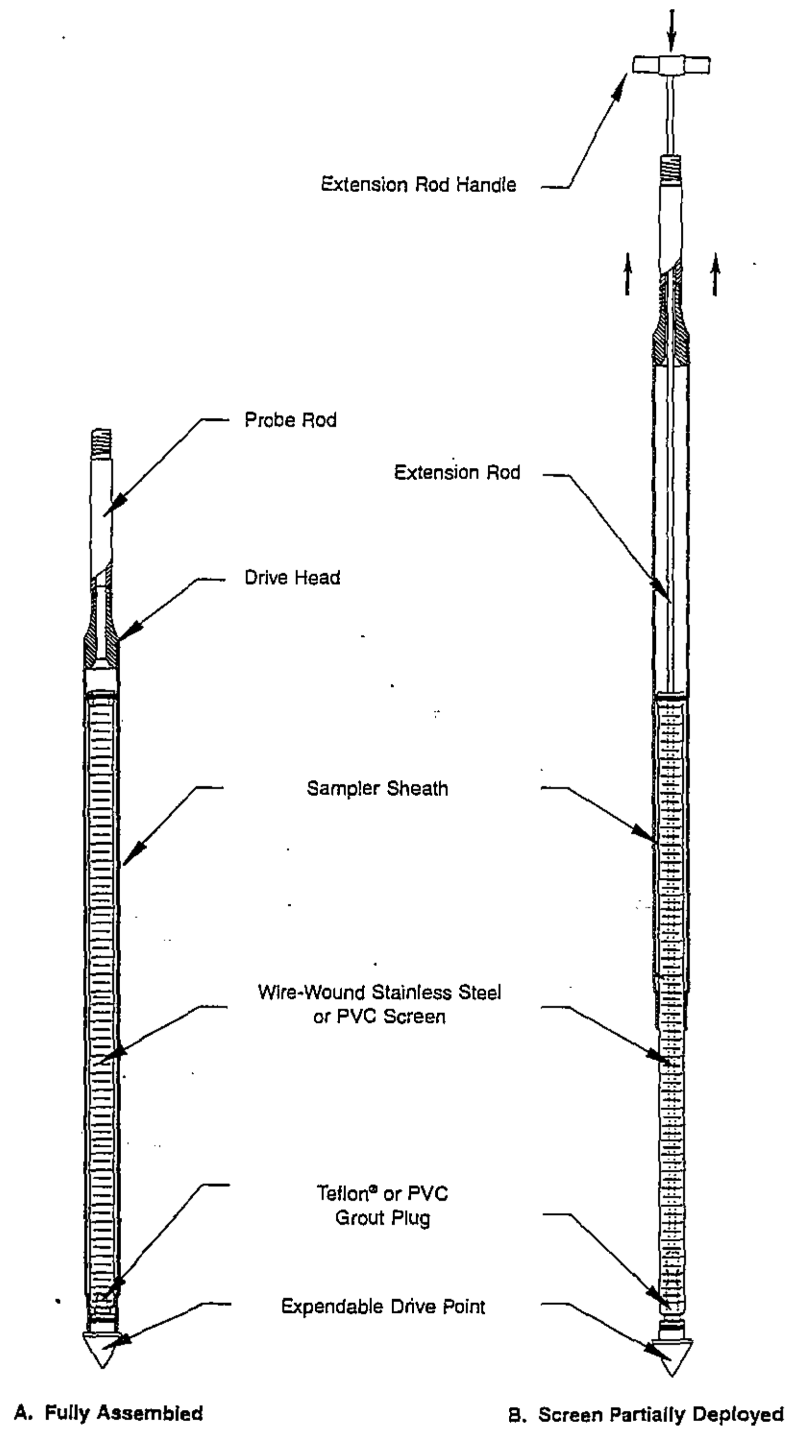



FIGURE 2.1
**Screen Point 15 Groundwater Sampler**

## 3.0 REQUIRED EQUIPMENT

The following equipment is required to successfully recover representative groundwater samples with the Geoprobe Screen Point 15 Groundwater Sampler and probing system. See Figure 3.1 for Screen Point 15 parts identification.

| Screen Point 15 Groundwater Sampler Parts | Quantity | Part Number |
|---|---|---|
| O-ring Service Kit , 1.0-inch rods (100 of each O-ring) | -1- | GW1504K |
| O-ring Service Kit, 1.25-inch rods (100 of each O-ring) | -1- | GW1505K |
| Sampler Sheath | -1- | GW1510* |
| Drive Head, 0.625-inch bore, 1.25-inch rods (optional) | -1- | GW1512 |
| Drive Head, 0.5-inch bore, 1.25-inch rods | -1- | GW1513 |
| Drive Head, 1.0-inch rods | -1- | GW1515 |
| Screen, Wire-Wound Stainless Steel, 4-Slot | -1- | GW1520* |
| Screen, PVC, 10-Slot (optional) | -1- | GW1530 |
| Screen Push Adapter | -1- | GW1535* |
| Grout Plug Push Adapter | -1- | GW1540* |
| Grout Nozzle | -1- | GW1545 |
| Grout Plugs, Teflon® (Pkg. of 25) | -1- | GW1550K |
| Grout Plugs, PVC (Pkg. of 25) | -1- | GW1551K* |
| Expendable Drive Points, Steel (Pkg. of 25) | -1- | GW1555K* |
| Expendable Drive Points, Aluminum (Pkg. of 25) (optional) | -1- | GW1555ALK |
| | | |
| Screen Point 15 Groundwater Sampler Kit for 1.0-inch rods | | GW1500K |
| Includes (*) items plus: | | |
| O-ring Service Kit, 1.0-inch rods (100 or each O-ring) | -1- | GW1504K |
| Drive Head, 1.0-inch rods | -1- | GW1515 |
| | | |
| Screen Point 15 Groundwater Sampler Kit for 1.25-inch rods | | GW1512K |
| Includes (*) items plus: | | |
| O-ring Service Kit, 1.25-inch rods (100 or each O-ring) | -1- | GW1505K |
| Drive Head, 1.25-inch rods | -1- | GW1513 |

| Geoprobe Tools | Quantity | Part Number |
|---|---|---|
| Drive Cap, 1.25-inch probe rods** | -1- | AT1200 |
| Slotted Pull Cap, 1.25-inch probe rods (optional)** | -1- | AT1203 |
| Pull Cap, 1.25-inch probe rods** | -1- | AT1204 |
| Probe Rod, 1.25-inch x 48-inch*** | Variable | AT1248 |
| O-rings for 1.25-inch Probe Rods (Pkg. of 25) | Variable | AT1250R |
| Extension Rod, 36-inch (optional) | Variable | AT67 |
| Extension Rod, 48-inch | Variable | AT671 |
| Extension Rod, 1-meter (optional) | Variable | AT675 |
| Extension Rod Coupler | Variable | AT68 |
| Extension Rod Handle | -1- | AT69 |
| Extension Rod Jig | -1- | AT690 |
| Quick Link Extension Rod Connectors (Optional) | Variable | AT694K |
| Casing Pull Kit (for GH-40 hammer) | -1- | GW4600K |
| Rod Grip Pull System (may be used in place of GW4600K) | -1- | GH1250K |

**Accessories for 1.0-inch OD probe rods are also available from Geoprobe Systems.
***Geoprobe 1.0-inch and 1.25-inch OD probe rods are available in lengths of 36-, 48-, and 60 inches, as well as 1 meter.

| Additional Tools | Quantity |
|---|---|
| Adjustable Wrench | -1- |
| Pipe Wrenches | -2- |

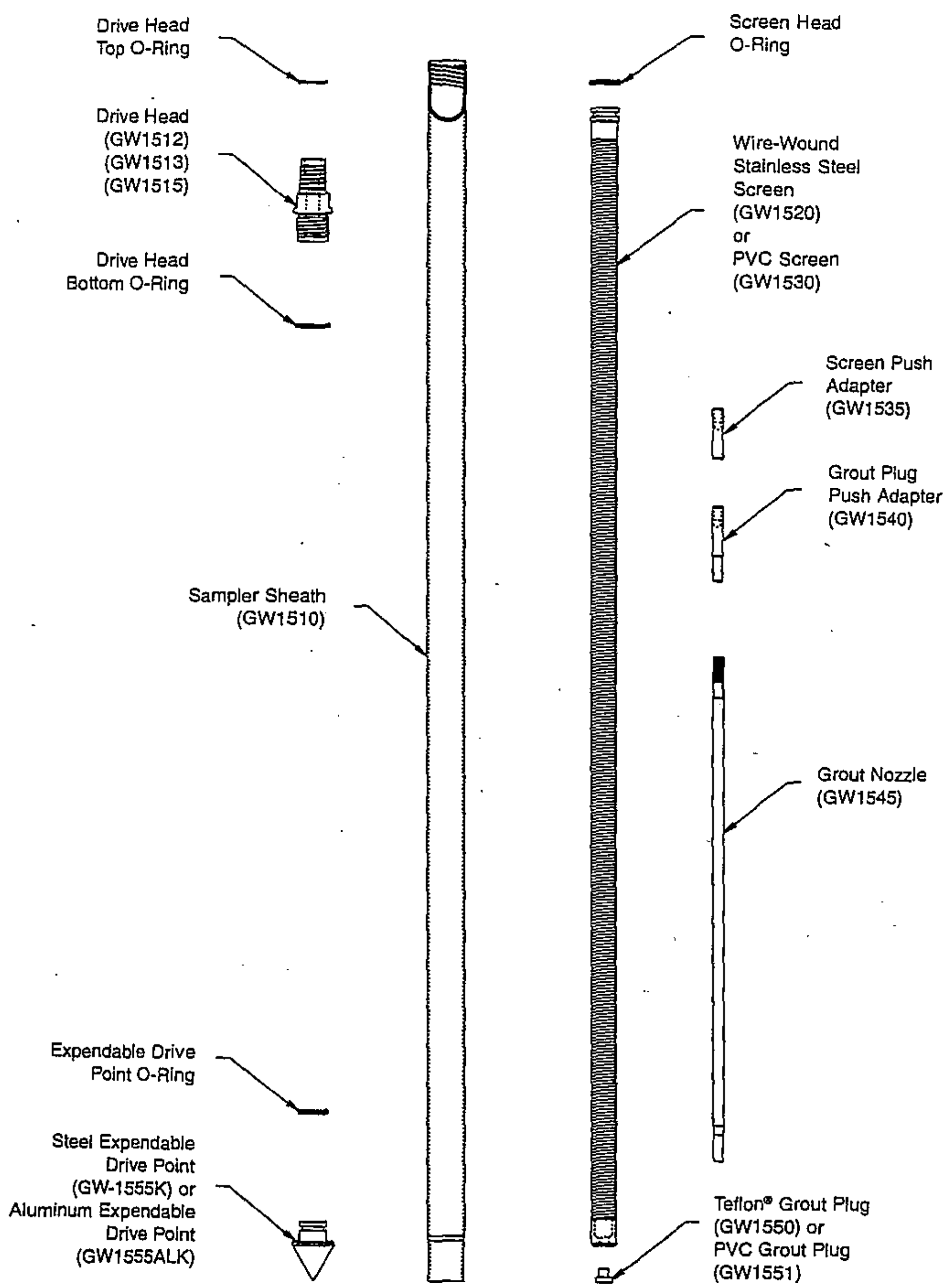



FIGURE 3.1
**Screen Point 15 Groundwater Sampler Parts**



GMEI-00156

# 4.0 OPERATION

## 4.1 Basic Operation

The Screen Point 15 Groundwater Sampler utilizes a stainless steel or PVC screen which is encased in an alloy steel sampler sheath. An expendable drive point is placed in the lower end of the sheath while a drive head is attached to the top. O-rings on the drive head and expendable point provide a watertight sheath which keeps contaminants out of the system as the sampler is driven to depth. Once the desired sampling interval is reached, extension rods equipped with a screen push adapter are inserted down the inside diameter of the probe rod string. The tool string is then retracted approximately 44 inches (1118 mm) while the screen is held in place with the extension rods. At this point the system is ready for groundwater sampling. When sampling is complete, a removable plug in the bottom of the screen allows for grouting below the sampler as the tool string is retrieved.

## 4.2 Decontamination

In order to collect representative groundwater samples, all Screen Point 15 parts must be thoroughly cleaned before and after each use. Scrub all metal parts using a stiff, long-bristle brush and a nonphosphate soap solution. Steam cleaning may be substituted for hand-washing if available. Rinse with distilled water and allow to air-dry before assembly.

## 4.3 Sampler Assembly (Fig. 4.1)

Part numbers are listed for a standard sampler using 1.25-inch x 48-inch probe rods. Refer to Page 6 for screen, grout plug, drive head, extension rod, and probe rod alternatives.

1. Install an O-ring on a steel expendable drive point (GW1555K). Firmly seat the expendable point in the necked end of a sampler sheath (GW1510).

2. Place a PVC grout plug (GW1551) in the lower end of a wire-wound stainless steel screen (GW1520). Install an O-ring in the groove on the upper end of the screen. Slide the screen inside of the sampler sheath with the grout plug toward the bottom of the sampler. Ensure that the expendable point was not displaced by the screen.

3. Install a bottom O-ring on a drive head (GW1513). Thread the drive head onto the sampler sheath. Attach a drive cap (AT1200) to the top of the drive head. Ensure that the threads engage completely. Tighten with an adjustable wrench if necessary.

4. Sampler assembly is complete.

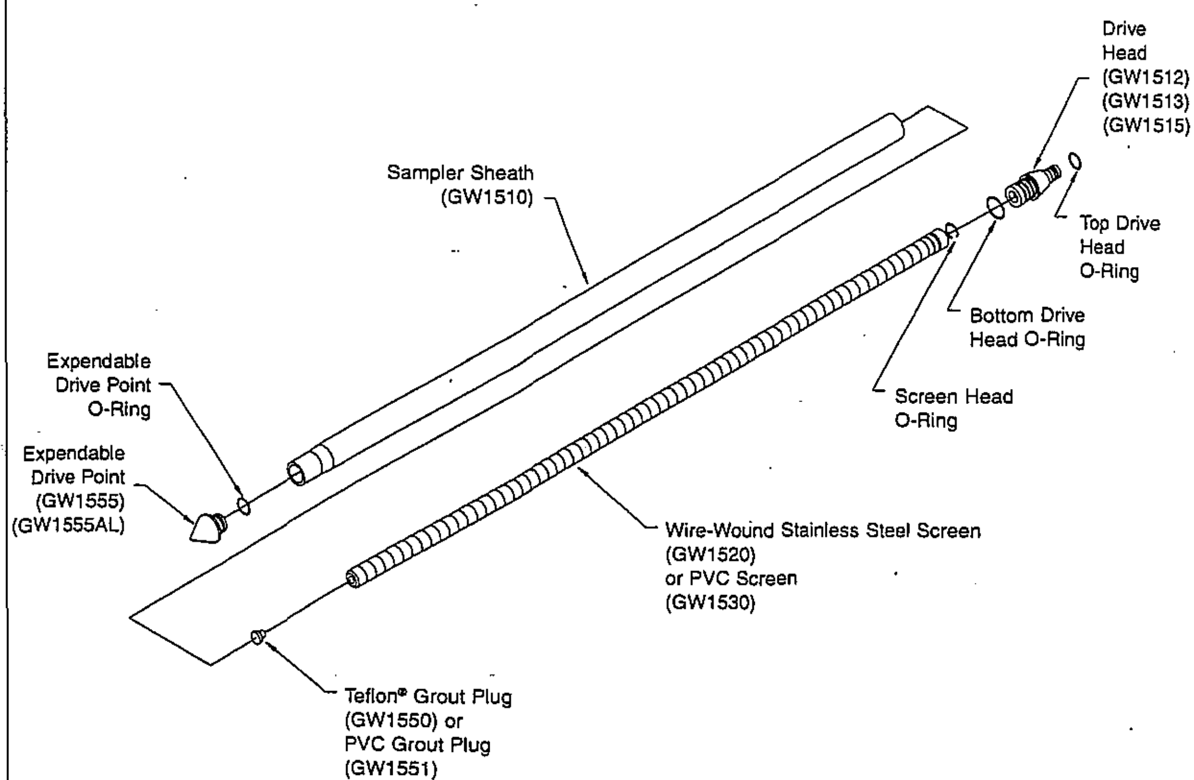



FIGURE 4.1
**Screen Point 15 Groundwater Sampler Assembly**



GMEI-00158

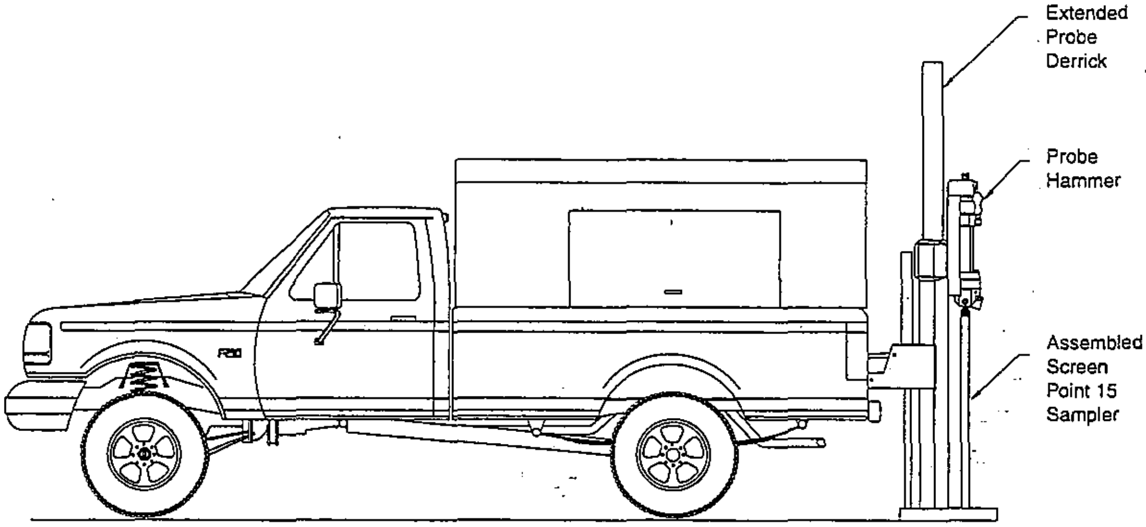



FIGURE 4.2
**Screen Point 15 Groundwater Sampler in Driving Position**

### 4.4 Driving the Screen Point 15 Sampler

To provide adequate room for screen deployment with the casing puller assembly, the probe derrick should be extended a little over halfway out of the carrier vehicle before driving the Screen Point 15 Sampler

1. Begin by placing the assembled sampler (Fig. 2.1) in the driving position beneath the hammer on the extended probe derrick (Fig. 4.2).

2. Drive the sampler with throttle control at slow speed for the first 1 or 2 feet to ensure that the sampler is driving straight. Switch the throttle control to fast speed for the remainder of the probe stroke.

3. Completely raise the hammer assembly. Remove the drive cap and place an O-ring in the top groove of the drive head. Distilled water may be used to lubricate the O-ring if needed. Add a 1.25-inch x 48-inch probe rod (AT1248) and reattach the drive cap to the rod string. Drive the sampler the entire length of the new rod with the throttle control at fast speed.

4. Repeat Step 3 until the desired sampling interval is reached. Approximately 12 inches (305 mm) of the last probe rod must extend above the ground surface to allow attachment of the puller assembly. A 12-inch (305 mm) rod may be added if the tool string is over-driven.

5. Remove the drive cap and retract the probe derrick away from the tool string.

### 4.5 Screen Deployment

1. Thread the screen push adapter (GW1535, Fig. 4.3) on an extension rod (AT67, AT671, or AT675). Attach a coupler (AT68) to the other end of the extension rod. Lower the extension rod inside of the probe rod taking care not to drop it down the tool string. An extension rod jig (AT690, Fig. 4.3) may be used to hold the rods.

2. Add extensions until the adapter contacts the bottom of the screen. To speed up this step, extension rod Quick Links (AT694K, Fig. 4.3) are recommended.

3. Maneuver the probe assembly into position for pulling.

   **Note:** In this section, "Puller" refers to either the Casing Pull Kit (GW4600K) or Rod Grip Pull System (GH1250K). The operator may choose which option to use. Refer to Figures 4.4 and 4.5 for puller configurations.

4. Ensure that at least 48 inches (1219 mm) of extension rod protrudes from the probe rod. Thread an extension rod handle (AT-69, Fig. 4.3) on the top extension.

5. Retract probe rods and sampler sheath while physically holding the screen in place with the extension rods (Fig. 4.5B). A slight knock with the extension rod string will help to dislodge the expendable point and start the screen moving inside the sheath. Raise the hammer and pull bracket assembly about 44 inches (1118 cm). At this point the screen head will contact the necked portion of the sampler sheath (Fig. 4.5C.) and the extension rods will rise with the probe rods. The screen is now deployed. Use care when deploying a PVC screen so as not to break the screen when it contacts the bottom of the sampler sheath.

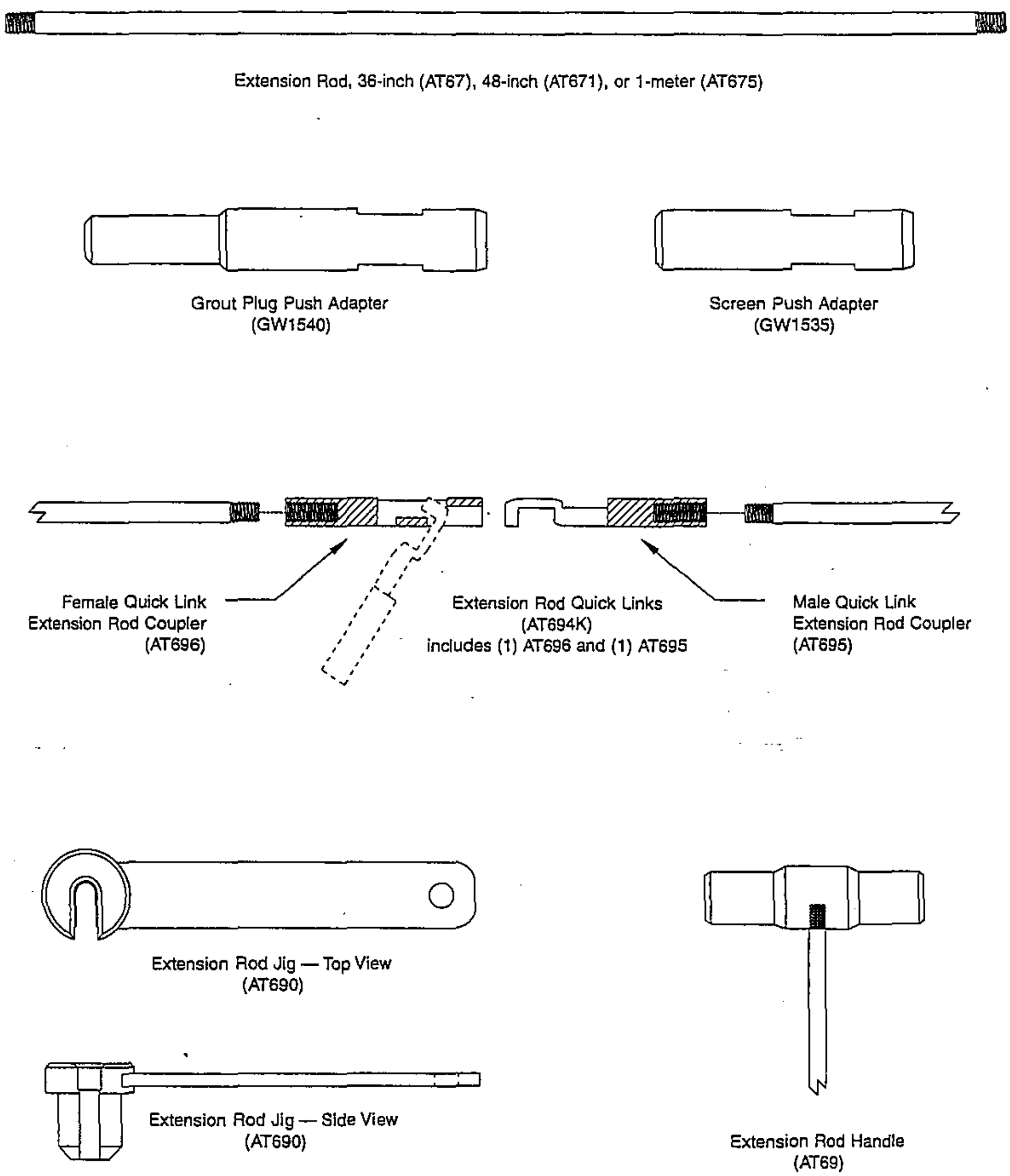



FIGURE 4.3
**Geoprobe Extension Rods and Accessories**

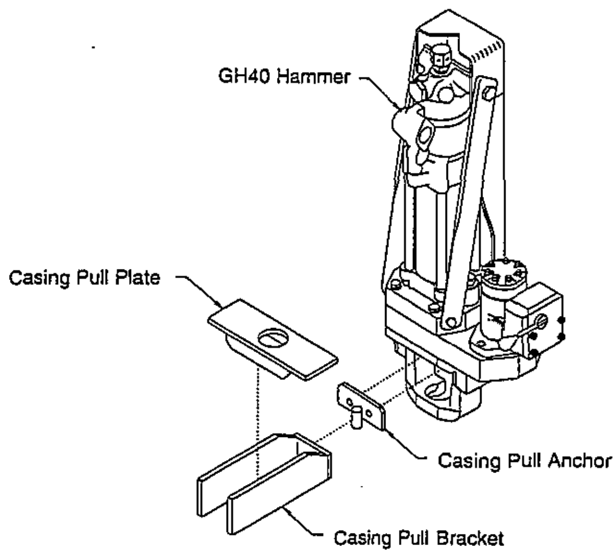



FIGURE 4.4
**Casing Puller Assembly for Units Originally Equipped With The GH-40 Hammer**

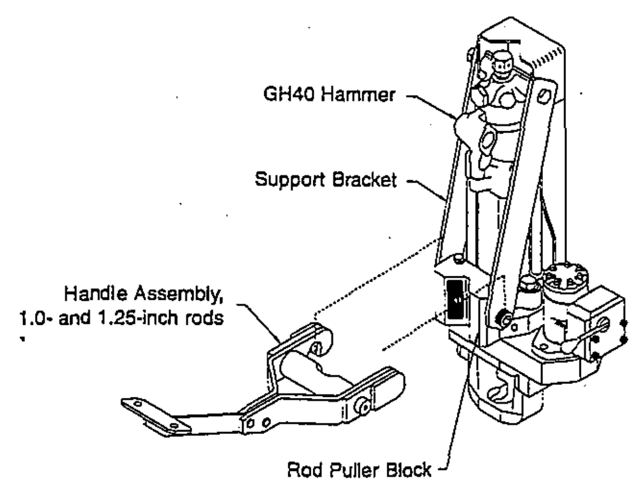



FIGURE 4.5
**Rod Grip Pull System for Units Equipped With The GH-40 Hammer**

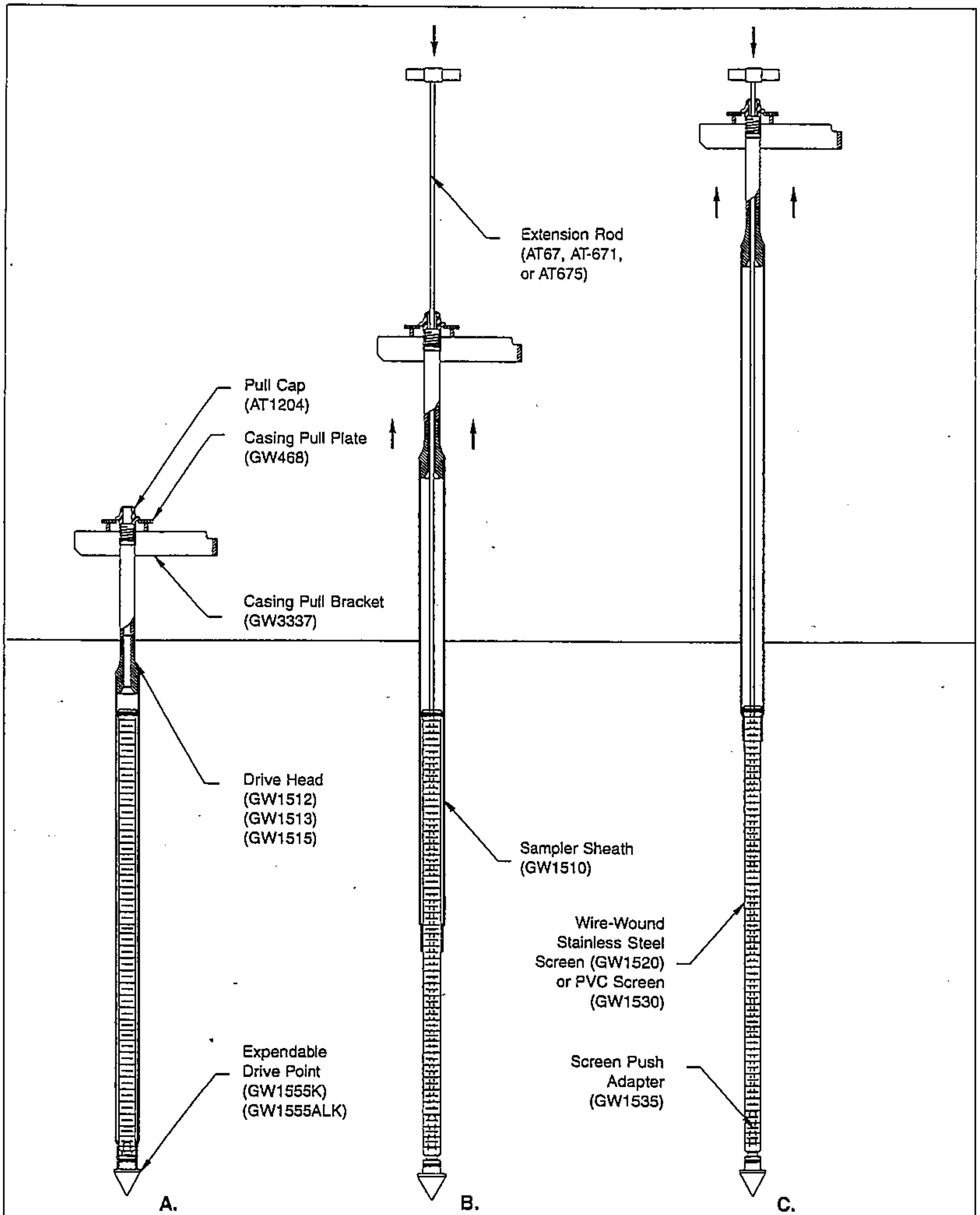



FIGURE 4.6
**Screen Deployment Using a Casing Pull Kit**



GMEI-00163

6. Lower the hammer assembly and retract the probe derrick. Remove the top extension rod and handle, pull cap, and top probe rod. Finally, extract all extension rods.

7. Groundwater samples can now be collected with a mini-bailer, peristaltic or vacuum pump, tubing bottom check valve assembly, or other acceptable small diameter sampling device.

8. When inserting the tubing down the rod string to collect a sample, ensure that the tubing enters the screen interval. The tubing will sometimes catch on the edge of the funnel opening of the screen head. An up-and-down motion combined with rotation helps move the tubing past the lip and into the screen.

### 4.6 Abandonment Grouting

The Screen Point 15 Sampler can meet ASTM D 5299 requirements for abandoning environmental wells or borings when grouting is conducted properly. A removable grout plug makes it possible to deploy tubing through the bottom of the screen. A GS500 or GS1000 Grout Machine is then used to pump grout into the open probe hole as the sampler is withdrawn. The following procedure is presented as an example only and should be modified to satisfy local abandonment grouting regulations.

1. Maneuver the probe assembly into position for pulling. Attach the puller to the top probe rod. Raise the tool string approximately 4 to 6 inches (102 to 152 cm) to allow removal of the grout plug.

   **Note:** A Slotted Pull Cap (AT1203) is needed if utilizing the Casing Pull Kit (GW4600K). This allows connection of the pull cap to the tool string with poly tubing extending from the top of the probe rod.

2. Thread the grout plug push adapter (GW1540, Fig. 4.3) onto an extension rod. Insert the adapter and extension rod inside the probe rod string. Add extensions until the adapter contacts the grout plug at the bottom of the screen. When the extension rods are slightly raised and lowered, a relatively soft rebound should be felt as the adapter contacts the grout plug. This is especially true when using a PVC screen.

3. Place a mark on the extension rod even with the top of the probe rod. Apply downward pressure on the extension rods and push the grout plug out of the screen. The mark placed on the extension rod should now be below the top of the probe rod. Remove all extension rods.

   **Note:** When working with a stainless steel screen, it may be necessary to raise and quickly lower the extension rods to jar the grout plug free. When the plug is successfully removed, a metal-on-metal sensation may be noted as the extension rods are gently "bounced" within the probe rods.

4. A grout nozzle (GW1545) is now connected to polyethylene tubing and inserted into the probe rods and down through the bottom of the screen (Fig. 4.7). It may be necessary to pump a small amount of clean water through the tubing during deployment to jet out sediments that settled in the bottom of the screen. Resistance will sometimes be felt as the grout nozzle passes through the drive head. Once again, rotate the tubing while moving it up-and-down to ensure that the nozzle has reached the bottom of the screen and is not hung up on the drive head.

   **Note:** All probe rods remain strung on the tubing as the tool string is pulled. Provide extra tubing length to allow sufficient room to lay the rods on the ground as they are removed. An additional 20 feet is generally enough.

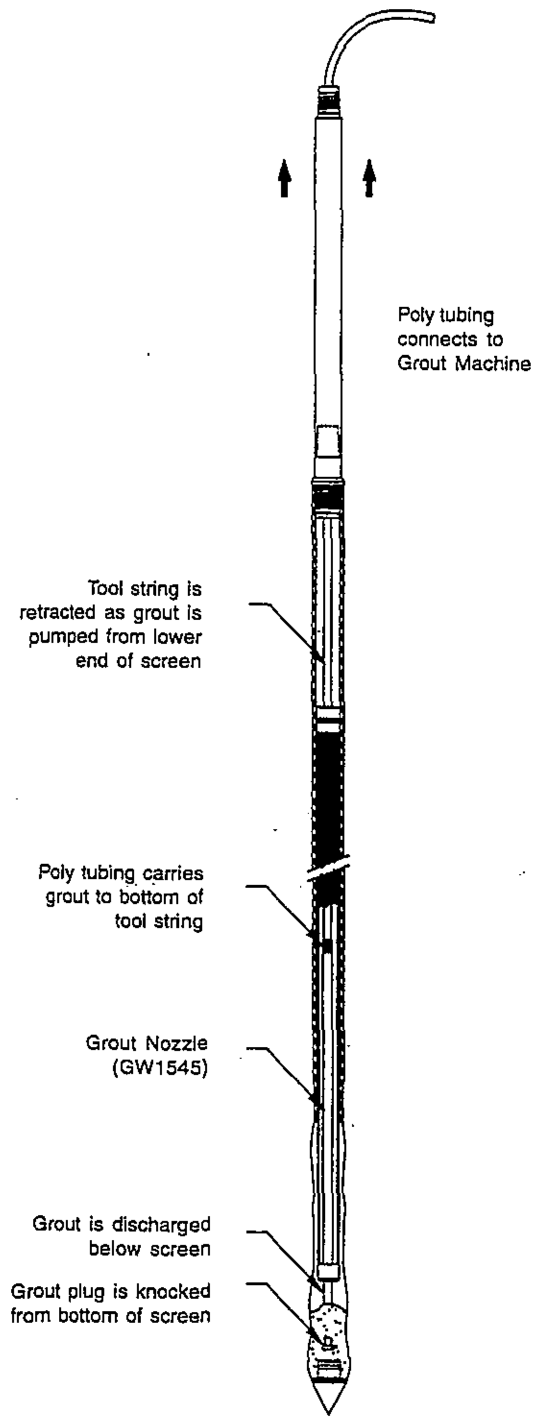



FIGURE 4.7
Grouting Through The Screen Point 15 Groundwater Sampler

**Note:** You may use the same poly tubing to grout the hole as was used to collect the groundwater sample. After sampling, completely lower the tubing to the bottom of the screen. Place a mark on the tubing even with the top of the rod string. Remove the tubing. Make a second mark on the tubing one grout nozzle length below the first mark. Now attach the nozzle to the leading end of the tubing and lower it to the bottom of the screen. The second mark on the tubing will be just below the top of the probe rods when the grout nozzle is fully deployed.

5. Position the probe assembly for pulling, taking care not to pinch or bind the tubing. Operate the grout pump while pulling the first rod. Coordinate pumping and pulling rates so that grout fills the void left by the sampler. Remove the split pull cap and unscrew the probe rod. Slide the rod over the tubing and place it on the ground near the end of the tubing to leave room for the remaining probe rods.

6. Repeat Step 5 until the sampler is retrieved. Do not bend or kink the tubing when pulling and laying out the probe rods. Sharp bends create weak spots in the tubing which may burst when pumping grout. Remember to operate the grout pump only when pulling the rod string. The probe hole is thus filled with grout from the bottom up as the rods are extracted.

7. Promptly clean all probe rods and sampler parts before the grout sets up and clogs the equipment.

### 4.7 Retrieving the Screen Point 15 Sampler

If grouting is not required, the Screen Point 15 sampler can be retrieved by pulling the probe rods as with most other Geoprobe sampling applications. The Rod Grip Pull System (GH1250K) should be used for this process as it allows the operator to remove rods without releasing the tool string. This keeps rods from falling to the bottom of the probe hole. If a rod grip pull system is not available, utilize a standard Pull Cap (AT1204). The process of retrieving the sampler with a standard pull cap is given below.

1. Position the probe derrick and hammer assembly over the tool string. Thread a pull cap (AT1204) onto the top probe rod.

2. Lower the hammer latch over the pull cap and retract the tool string one probe rod length.

3. Remove the pull cap and top probe rod and repeat Step 2 until the sampler sheath is at the ground surface.

4. Physically pull the sampler sheath and screen out of the ground taking care not to bend the screen on the way out. The Screen Point 15 Groundwater Sampler is now retrieved and ready to decontaminate for further use.

## 5.0 REFERENCES

American Society for Testing and Materials (ASTM), 1993. ASTM 5299 Standard Guide for Decommissioning of Groundwater Wells, Vadose Zone Monitoring Devices, Boreholes, and Other Devices for Environmental Activities: *1993 Annual Book of ASTM Standards, Vol. 0408.* Philadelphia, PA.

Geoprobe Systems, 1997, "97-98 Tools and Equipment Catalog."

Geoprobe Systems, 1995, "1995-96 Tools and Equipment Catalog."

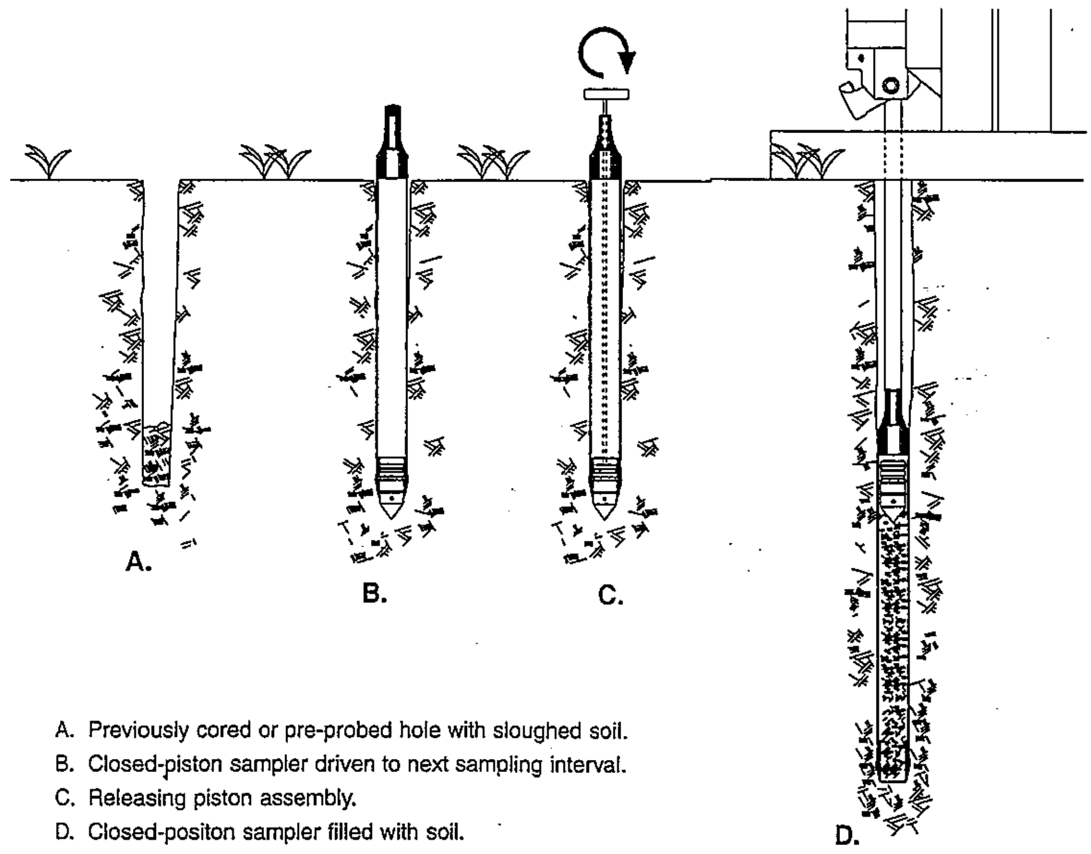
# Geoprobe Macro-Core® Soil Sampler

## Standard Operating Procedure

Technical Bulletin No. 95-8500

PREPARED: November, 1995

REVISED: September, 1997




A. Previously cored or pre-probed hole with sloughed soil.
B. Closed-piston sampler driven to next sampling interval.
C. Releasing piston assembly.
D. Closed-positon sampler filled with soil.

**SAMPLING WITH THE MACRO-CORE® CLOSED-PISTON SOIL SAMPLER**

Geoprobe® Systems

A DIVISION OF KEJR ENGINEERING

Geoprobe® is a Registered Trademark of
Kejr Engineering, Inc., Salina, Kansas

Macro-Core® is a Registered Trademark of
Kejr Engineering, Inc., Salina, Kansas

Macro-Core® Soil Sampler manufactured
under US Patent 5,606,139.

Macro-Core® Closed-Piston Drive Point
manufactured under US Patent 5,542,481

# 1.0 OBJECTIVE

The objective of this procedure is to collect a representative soil sample at depth and recover it for visual inspection and/or chemical analysis.

# 2.0 BACKGROUND

## 2.1 Definitions

**Geoprobe®*:** A brand name of high quality, hydraulically-powered machines that utilize both static force and percussion to advance sampling and logging tools into the subsurface.
** Geoprobe® is a registered trademark of Kejr Engineering, Inc., Salina, Kansas*

**Macro-Core® Soil Sampler*:** A solid barrel, direct push device for collecting continuous core samples of unconsolidated materials at depth. Although other lengths are available, the standard Macro-Core® Sampler has an assembled length of approximately 52 inches (1321 mm) with an outside diameter (OD) of 2.2 inches (56 mm). Collected samples measure up to 1300 ml in volume in the form of a 1.5-inch x 45-inch (38 mm x 1143 mm) core contained inside a removable liner. The Macro-Core® Sampler may be used for open-tube as well as closed-piston sampling.
** Macro-Core® is a registered trademark of Kejr Engineering, Inc., Salina, Kansas*

**Liner:** A 1.75-inch OD x 46-inch long (44 mm x 1168 mm) removable/replaceable, thin-walled tube inserted inside the Macro-Core® sample tube for the purpose of containing and storing soil samples. Liner materials include stainless steel, Teflon®, PVC, and PETG.

## 2.2 Discussion

In this procedure, the assembled Macro-Core Soil Sampler is attached to the leading end of a Geoprobe probe rod and driven into the subsurface using a Geoprobe soil probing machine. Additional probe rods are connected in succession to advance the sampler to depth. The Macro-Core Sampler may be used as an open-tube or closed-piston sampler.

The simplest and most common use of the Macro-Core Sampler is as an open-tube sampler (Fig. 2.1A). In this method, coring starts at the ground surface with an open-ended sampler. From the ground surface, the Macro-Core Sampler is advanced one sampling interval and then retrieved from the hole with the first soil core. In stable soils, the open-tube sampler is inserted back down the same hole to obtain the next core. Geoprobe operators have reported coring to depths exceeding 30 feet (9 m) with this method.

In unstable soils which tend to collapse into the core hole, the Macro-Core Sampler can be equipped with a piston assembly (Fig. 2.1B). This assembly actually locks into the cutting shoe and prevents soil from entering the sampler as it is advanced to the bottom of an existing hole.

The Macro-Core Closed-Piston Sampler is not designed to be driven through undisturbed soil. Soil is first removed to sampling depth with an open-tube sampler, or a pilot hole may be made with a Macro-Core Pre-Probe. A Macro-Core Piston Assembly is then installed and the sampler is inserted ~~or driven~~ back down the same hole. When the leading end of the sampler reaches the top of the next sampling interval, the piston is unlocked using extension rods inserted down the inside of the probe rods.

Once the piston is relieved, the tool string is simply driven another sampling interval. Soil entering the sampler pushes the piston assembly to the top of the sample liner where it is retrieved upon removal of the liner and soil core.

Loose soils will sometimes fall out of the Macro-Core Sampler as it is retrieved from depth. The Macro-Core Core Catcher (Fig. 2.1) was designed to alleviate this problem. Excellent results are obtained when the core catcher (sometimes called a basket retainer) is used with saturated sands and other non-cohesive soils. A core catcher is not necessary when sampling tight soils and may actually inhibit sample recovery. Constructed of PVC, the core catcher may be used with PVC, PETG, Teflon®, and stainless steel liners.

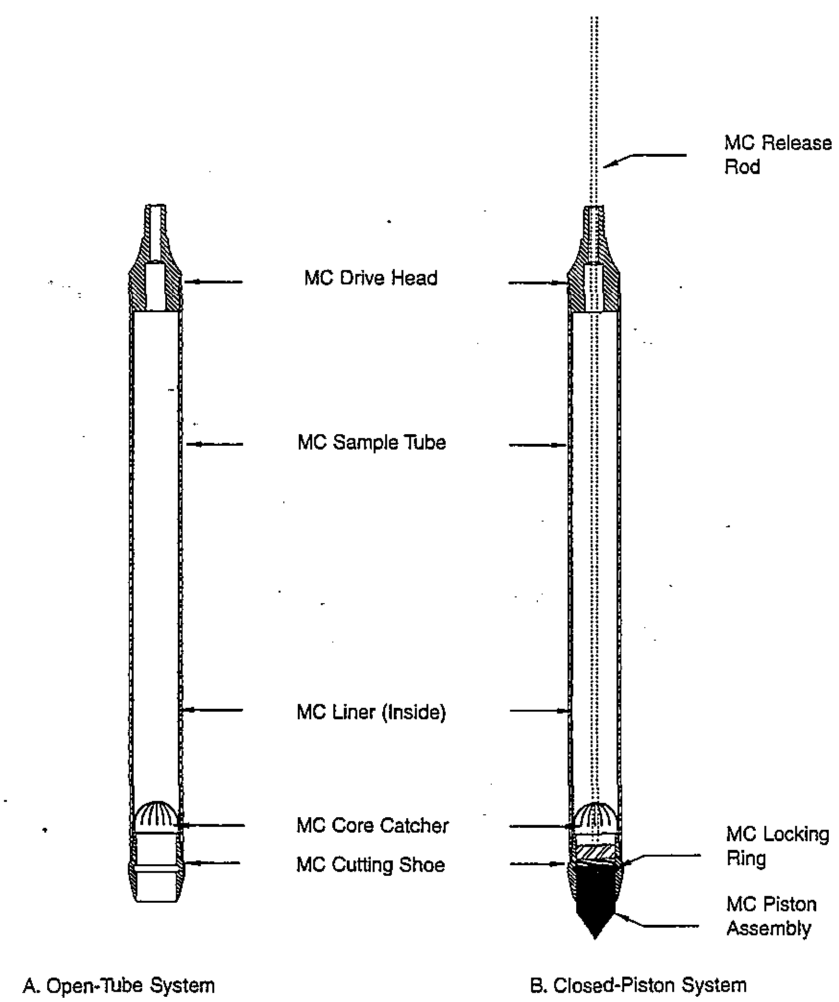



FIGURE 2.1
**Macro-Core® Soil Sampler Assemblies**



GMEI-00171

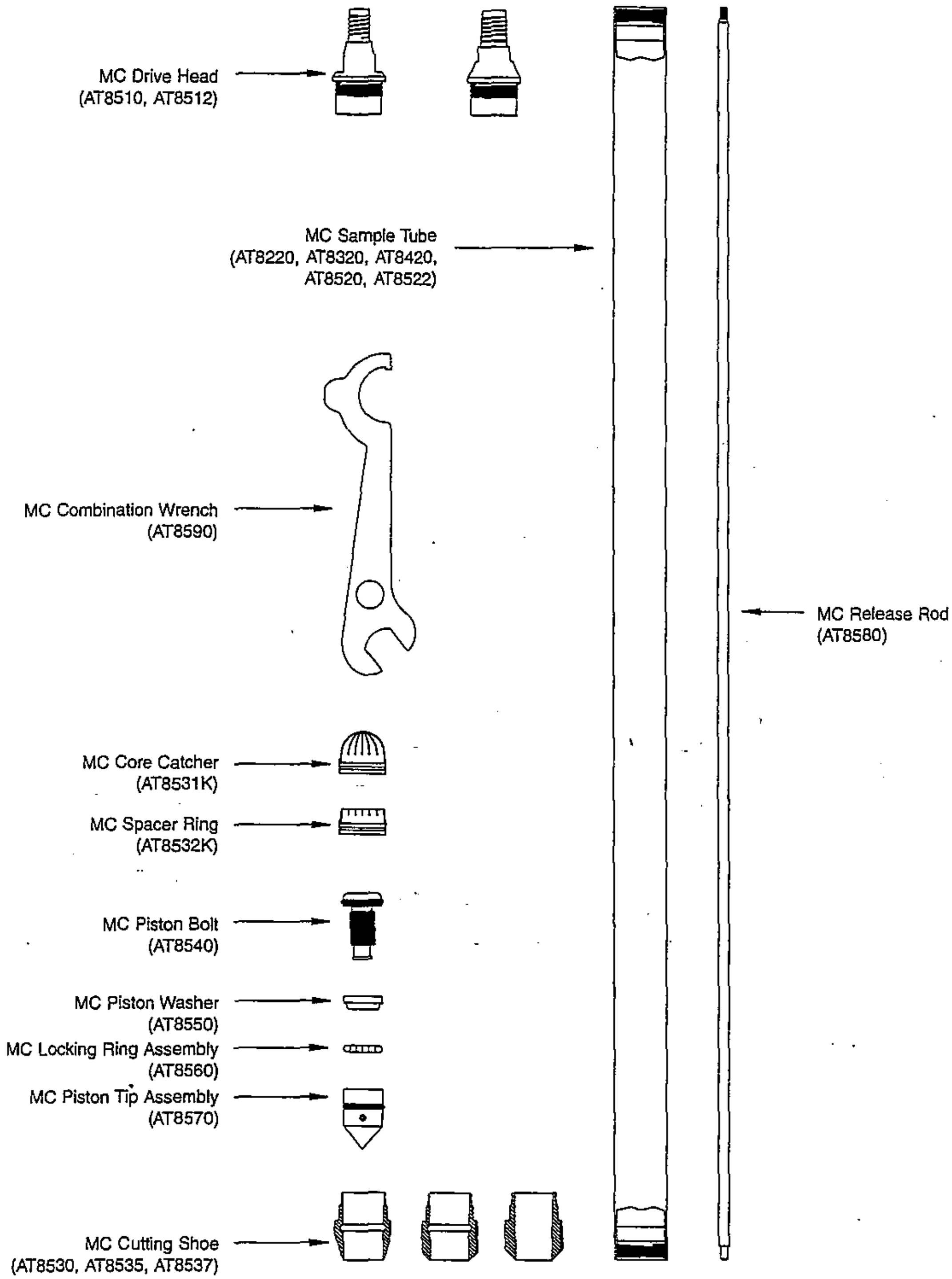



FIGURE 3.1
**Macro-Core® Soil Sampler Parts**

## 3.0 REQUIRED EQUIPMENT

The following equipment is used to recover samples using the Geoprobe Macro-Core Soil Sampler and probing system. Although many options are available (sampler length, liner material, etc.), the basic sampler configuration does not change. Refer to Figure 3.1 (previous page) to view the major components of the Macro-Core sampler.

| MACRO-CORE SAMPLER PARTS | PART NUMBER |
|---|---|
| MC Drive Head, for use with 1.0-inch probe rods | AT8510 |
| MC Drive Head, for use with 1.25-inch probe rods | AT8512 |
| MC Sample Tube, 24-inch, unplated | AT8220 |
| MC Sample Tube, 36-inch, unplated | AT8320 |
| MC Sample Tube, 1-meter, unplated | AT8420 |
| MC Sample Tube, 48-inch, Ni-plated | AT8520 |
| MC Sample Tube, 48-inch, unplated | AT8522 |
| MC Cutting Shoe, standard | AT8530 |
| MC Cutting Shoe, heavy-duty | AT8535 |
| MC Cutting Shoe, 0.125 inches undersized | AT8537 |
| MC Combination Wrench | AT8590 |
| Nylon Brush for MC Sample Tubes | BU700 |

| MACRO-CORE PISTON PARTS | PART NUMBER |
|---|---|
| MC Closed-Piston Kit* | AT8501K |
| MC Piston Assembly* | AT8505 |
| MC Piston Bolt | AT8540 |
| MC Piston Washer | AT8550 |
| MC Locking Ring Assembly | AT8560 |
| MC Locking Ring Springs (pkg. of 10) | AT8561K |
| MC Locking Ring Pins (pkg. of 12) | AT8562 |
| MC Piston Tip Assembly | AT8570 |
| MC Piston O-rings (pkg. of 25) | AT8570R |
| MC Piston Tip Cup Point Set Screws (pkg. of 10) | AT8571 |
| MC Piston Tip Half-Dog Set Screws (pkg. of 10) | AT8572 |
| MC Piston Release Rod | AT8580 |

| MACRO-CORE LINERS AND ACCESSORIES | PART NUMBER |
|---|---|
| MC Stainless Steel Liner Assembly, 48-inch | AT7235 |
| MC Teflon® Liner Assembly, 48-inch | AT724 |
| MC PETG Liner, thin-wall, 48-inch, (box of 66) | AT725K |
| MC Vinyl End Caps (66 pair) | AT726K |
| MC Heavy-Duty PETG Liner Assembly, 48-inch (box of 66) | AT825K |
| MC PVC Liner Assembly, clear, 24-inch (box of 66) | AT922K |
| MC PVC Liner Assembly, clear, 36-inch (box of 66) | AT923K |
| MC PVC Liner Assembly, clear, 1-meter (box of 66) | AT924K |
| MC PVC Liner Assembly, clear, 48-inch (box of 66) | AT925K |
| MC Liner Cutter Kit* | AT8000K |
| MC Liner Cutting Tool | AT8010 |
| MC Liner Cutter Holder | AT8020 |
| MC Liner Cutter Blades (pkg. of 5) | AT8030 |
| MC Liner Circular Cutting Tool | AT8050 |
| MC Core Catchers (pkg. of 25) | AT8531K |
| MC Spacer Rings (pkg. of 25) | AT8532K |

*See Page 7 for component listing.



GMEI-00173

| GEOPROBE TOOLS** | PART NUMBER |
|---|---|
| Drive Cap, for use with 1.25-inch probe rods | AT1200 |
| Pull Cap, for use with 1.25-inch probe rods | AT1204 |
| Probe Rod, 1.25 inches x 36 inches | AT1236 |
| Probe Rod, 1.25 inches x 1 meter | AT1239 |
| Probe Rod, 1.25 inches x 48 inches | AT1248 |
| Probe Rod, 1.25 inches x 60 inches | AT1260 |
| MC Pre-Probe, 2-inch OD | AT1247 |
| MC Pre-Probe, 2.5-inch OD | AT1242 |
| MC Pre-Probe, 3-inch OD | AT1252 |
| Extension Rod, 36-inch | AT67 |
| Extension Rod, 48-inch | AT671 |
| Extension Rod, 1-meter | AT675 |
| Extension Rod Coupler | AT68 |
| Extension Rod Handle | AT69 |
| Extension Rod Quick Links | AT694K |
| Machine Vise | FA300 |

ADDITIONAL TOOLS

Allen Wrench, 1/8 inch
Pipe Wrenches (2)

Three items in the parts listing on Pages 6 were identified with an asterick (*). A listing of the components of each item is given below.

| MACRO-CORE KIT / COMPONENT | QUANTITY | PART NUMBER |
|---|---|---|
| MC Liner Cutter Kit | | AT8000K |
| MC Liner Cutting Tool | -1- | AT8010 |
| MC Liner Cutter Holder | -1- | AT8020 |
| MC Liner Cutter Blades (pkg. of 5) | -1- | AT8030 |
| MC Closed-Piston Kit | | AT8501K |
| MC Locking Ring Springs (pkg. of 10) | -1- | AT8561K |
| MC Cutting Shoe, standard | -1- | AT8530 |
| MC Piston Assembly | -1- | AT8505 |
| MC Piston Assembly | | AT8505 |
| MC Piston Bolt | -1- | AT8540 |
| MC Piston Washer | -1- | AT8550 |
| MC Locking Ring Assembly | -1- | AT8560 |
| MC Piston Tip Assembly | -1- | AT8570 |

**Geoprobe tools and accessories are also available for use with 1.0-inch OD (outside diameter) probe rods.

# 4.0 OPERATION

Size and material options have resulted in an extensive list of Macro-Core part numbers. To simplify the instructions presented in this document, part numbers are listed in the illustrations only. Refer to Pages 6 and 7 for a complete parts listing.

## 4.1 Decontamination

Before and after each use, thoroughly clean all parts of the soil sampling system according to project requirements. A new, clean liner is recommended for each use if using PETG, PVC, or Teflon® liners.

Stainless Steel Liners from Geoprobe Systems are cleaned at the factory with an agitated detergent bath at a temperature of approximately 180 degrees F. After rinsing with 180-degree tap water, the liner is air dried, wrapped in PVC outer cladding, and capped with vinyl end caps.

Thoroughly clean the sampler before assembly, not only to remove contaminants but also to ensure correct operation. Dirty threads complicate assembly and may lead to sampler failure. Sand is particularly troublesome as it can bind liners in the sample tube resulting in wasted time and lost samples.

## 4.2 Field Blank

It is suggested that a field blank be taken on a representative sample liner prior to starting a project and at regular intervals during extended projects. Liners can become contaminated in storage. A field blank will prove that the liners do not carry contaminates which can be transferred to soil samples. The following information is offered as an example method which may be used to take a field blank. Make the appropriate modifications for the specific analytes of interest to the investigation.

*Example Procedure:*

REQUIRED EQUIPMENT

MC Liner ........................................ (1)
MC Vinyl End Caps ........................................ (2)
Distilled Water ........................................ (100 ml)
VOA Vial (or other appropriate sample container) .................... (1)

1. Place a vinyl end cap on one end of the liner.

2. Pour 100 milliliters of distilled water (or other suitable extracting fluid) into the liner.

3. Place a vinyl end cap on the open end of the liner.

4. From the vertical position, repeatedly invert the liner so that the distilled water contacts the entire inner surface. Repeat this step for one minute.

5. Remove one end cap from the liner, empty contents into an appropriate sample container, and cap the container.

6. Perform analysis on the extract water for the analytes of interest to the investigation.

### 4.3 Open-Tube Sampler Assembly

1a. **With MC Core Catcher.** Place the open end of an MC Core Catcher over the threaded end of an MC Cutting Shoe as shown in Figure 4.1. Apply pressure to the core catcher until it snaps into the machined groove on the cutting shoe.

    **NOTE:** AT725K (thin-wall PETG) liners have a swedged end which is generally slipped directly over the groove in the cutting shoe (Fig. 4.2). To use a core catcher with these liners, cut approximately 3/8 inches (10 mm) of material from the swedged end of the liner and proceed to Step 2.

1b. **Without MC Core Catcher.** Push the base of an MC Spacer Ring onto the threaded end of a cutting shoe until it snaps into place (Fig. 4.3).

    **NOTE:** With the exception of AT-725K (thin-wall PETG) liners, all liners must utilize either a spacer ring or core catcher. PETG liners have a swedged end which slides directly over the end of the cutting shoe. Attach the liner to the cutting shoe (Fig. 4.2) before proceeding to Step 2.

2. Thread the cutting shoe into one end of an MC Sample Tube (Fig. 4.4). Tighten until the end of the sample tube contacts the machined shoulder of the cutting shoe.

3. Insert the appropriate liner into the sample tube (Figure 4.4). (The liner is all ready installed if using thin-wall PETG liners (AT725K) without a core catcher).

4. Connect an MC Drive Head to the top of the sample tube (Fig. 4.4) and securely tighten with the MC Combination Wrench (Fig. 4.5). Ensure that the end of the sample tube contacts the machined shoulder of the drive head.

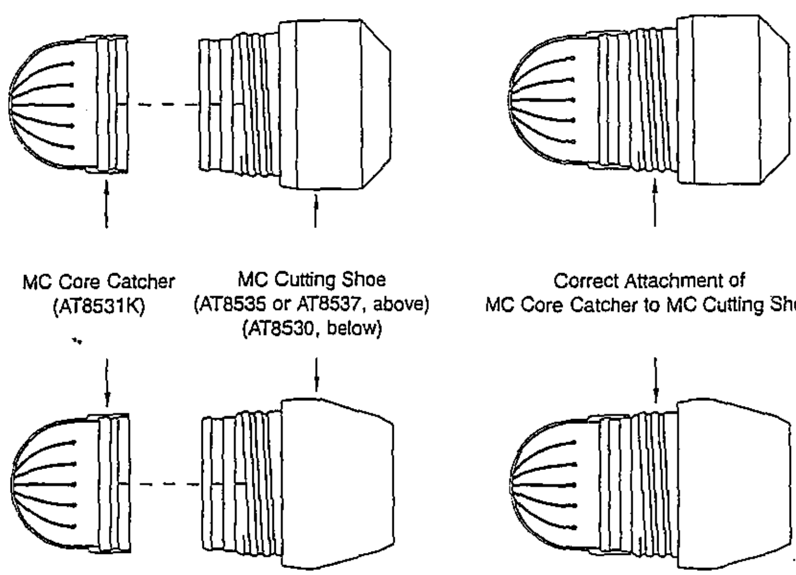



FIGURE 4.1
Macro-Core® Core Catcher Attachment

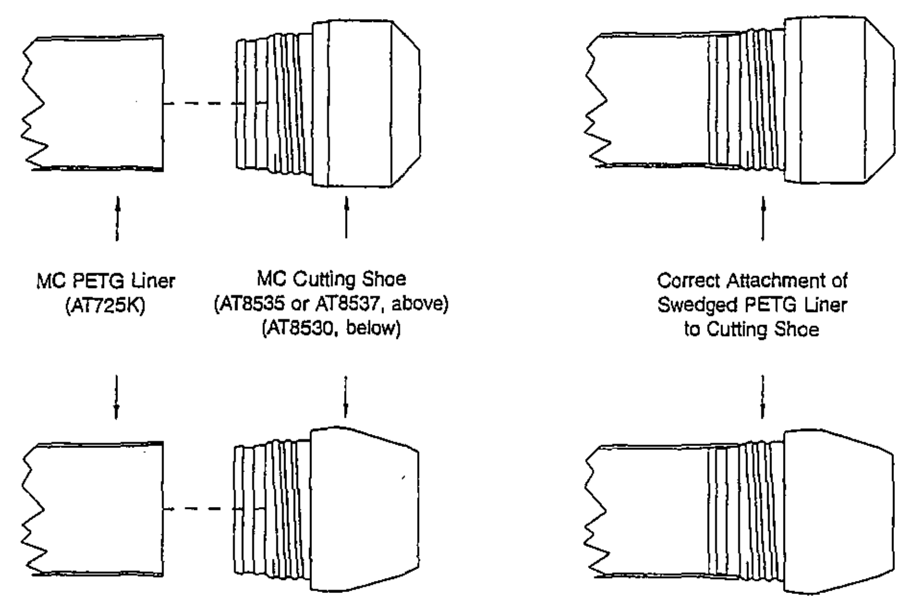



FIGURE 4.2
Macro-Core® PETG Liner Attachment

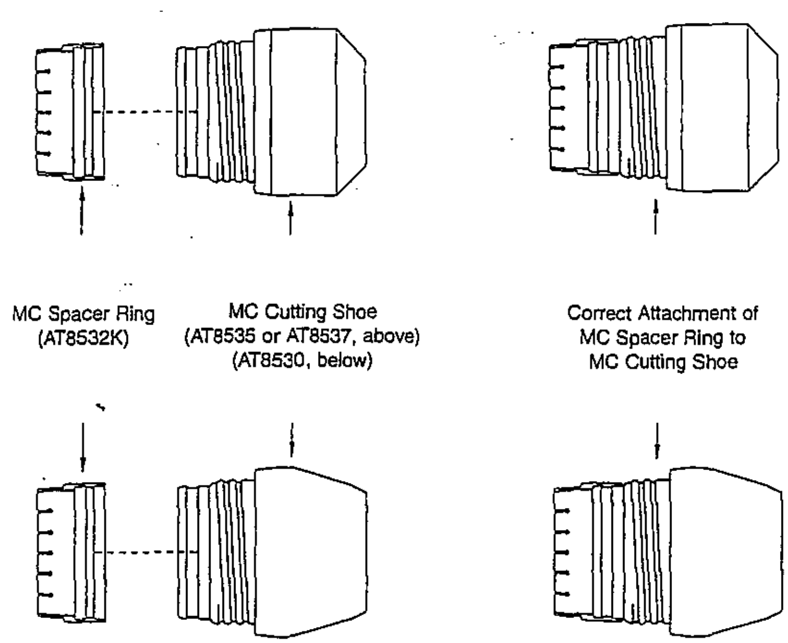



FIGURE 4.3
Macro-Core® Spacer Ring Attachment

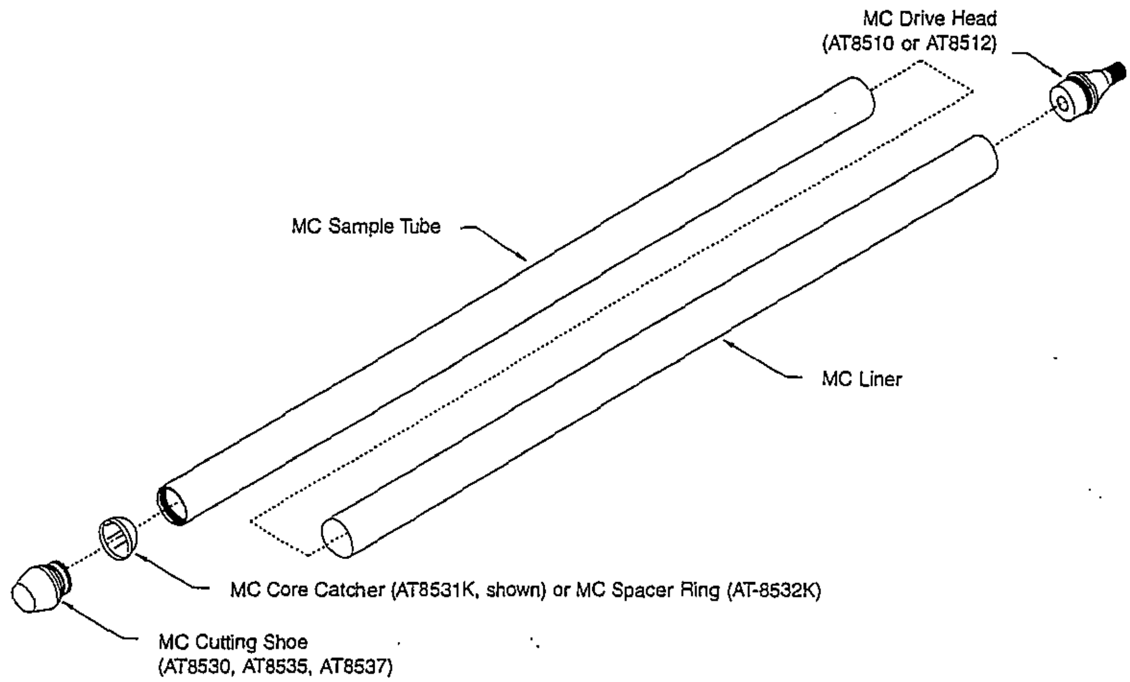



FIGURE 4.4
Macro-Core® Open-Tube Sampler Assembly

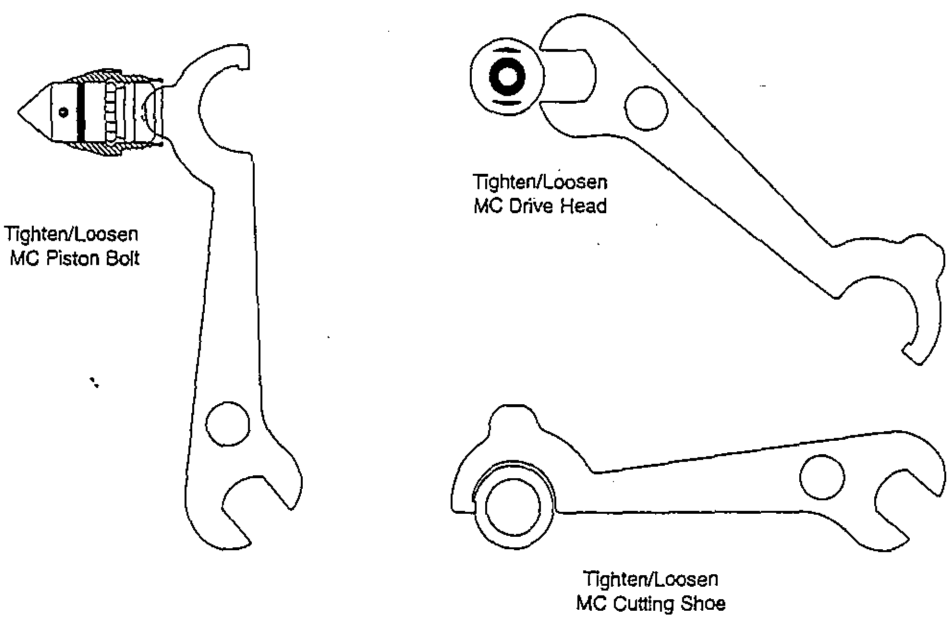



FIGURE 4.5
Macro-Core® Combination Wrench Applications



GMEI-00178

## 4.4 Closed-Piston Sampler Assembly (Fig. 4.6)

1. Install an O-ring in the machined groove on the piston bolt head (A) and piston tip (B).

2. Place a piston washer on a piston bolt with the radius side away from bolt head.

3. Position a locking ring on the piston bolt and thread the bolt into the piston tip.

   **NOTE:** Piston bolt and tip are left-hand threaded.

4. Screw the piston bolt down tight and install a half-dog set screw in the hole on the side of the piston tip. With a 1/8-inch allen wrench, tighten the set screw until it contacts the stem of the piston bolt, then back it out one-quarter turn.

5. Back the piston bolt out until the set screw hits the bottom shoulder on the bolt (approximately four full turns). The bolt must be tight against the set screw to prohibit the set screw from turning while completing Step 6.

6. Lock the half-dog set screw into place by installing a cup point set screw in the same hole. The cup point set screw should be tight but the piston bolt should remain free to turn approximately four full turns.

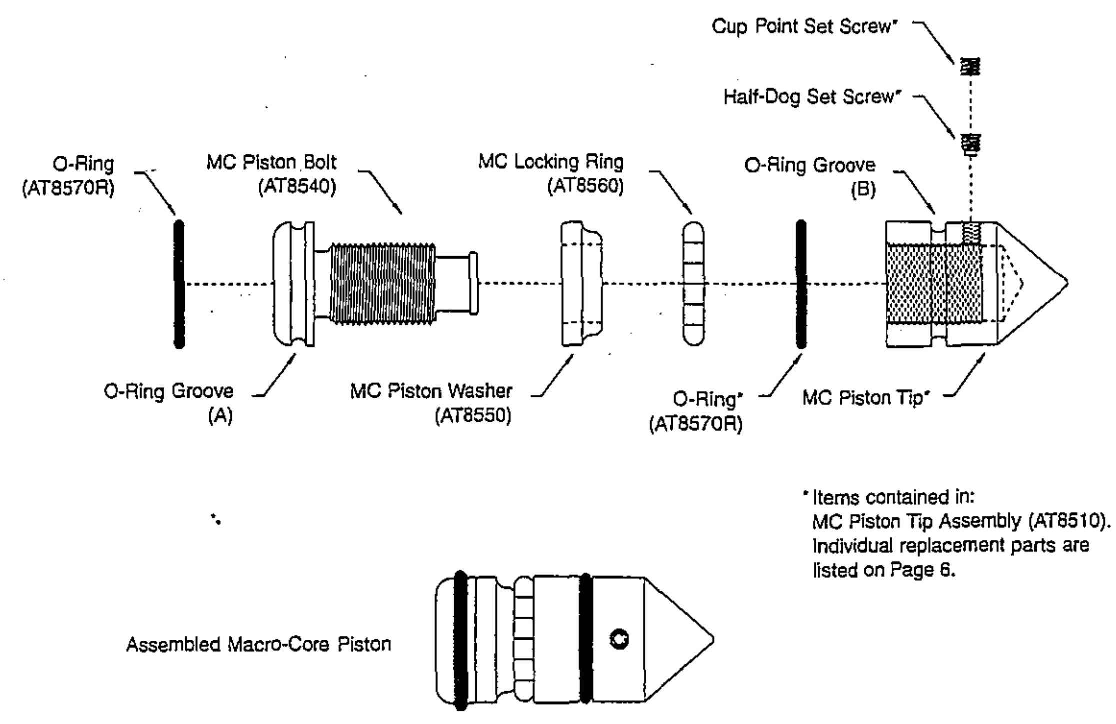



FIGURE 4.6
Macro-Core® Piston Assembly (AT8505)



GMEI-00179

NOTE: The top of the cup point set screw must not protrude from the piston tip. File or grind the set screw flush with the side of the tip if necessary. The piston assembly is ready to install in the cutting shoe.

7. Slide an assembled piston into a cutting shoe. The piston should be placed so that one half of the set screw (located on the side of the tip) protrudes from under the edge of the cutting shoe (Fig. 4.7).

8. Tighten the piston bolt (left-hand threads) using the combination wrench (Fig 4.8).

9a. **With MC Core Catcher.** Place the open end of a core catcher over the threaded end of a cutting shoe (Fig. 4.9). Apply pressure to the core catcher until it snaps into the machined groove on the cutting shoe.

NOTE: AT725K (thin-wall PETG) liners have a swedged end which is generally slipped directly over the groove in the cutting shoe (Fig. 4.10). To use a core catcher with these liners, simply cut approximately 3/8 inches (10 mm) of material from the swedged end of the liner and continue to Step 10.

**Figure 4.8. Using MC Combination Wrench to tighten MC Piston Bolt inside MC Cutting Shoe.**

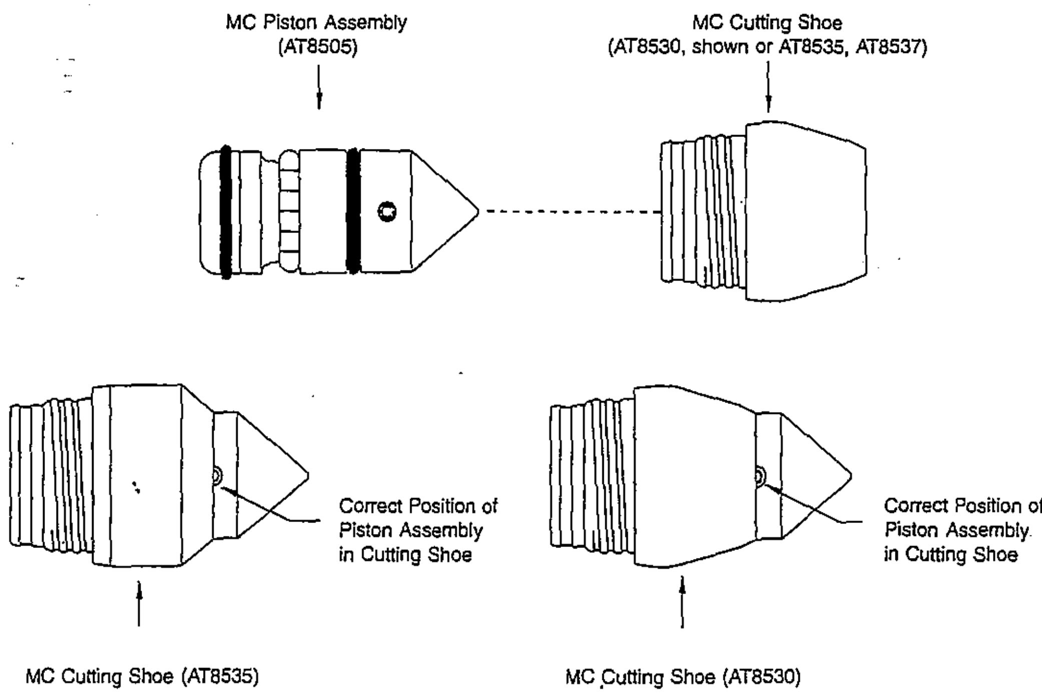



FIGURE 4.7
Installation of Macro-Core® Piston Assembly into Cutting Shoe



GMEI-00180

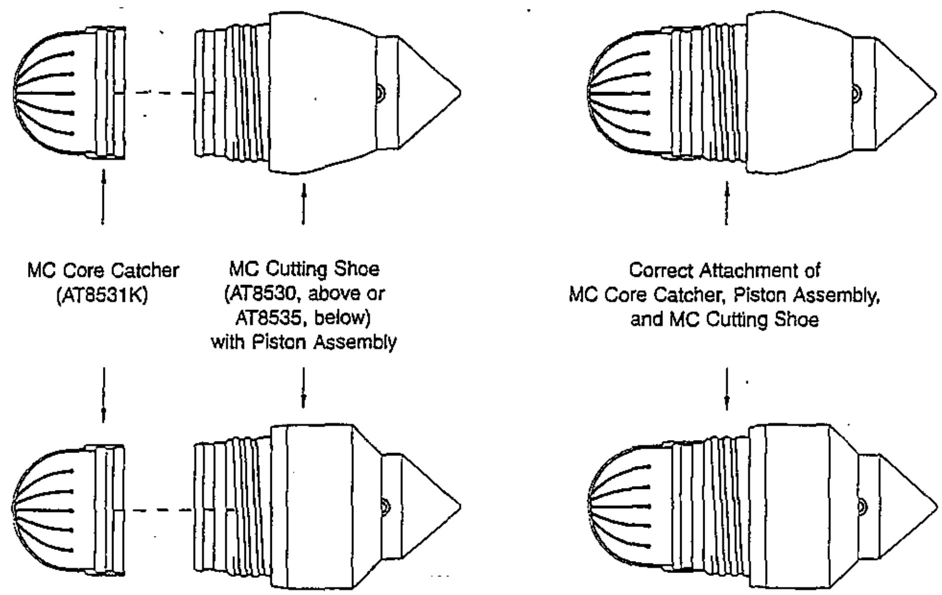



FIGURE 4.9
Macro-Core® Core Catcher Attachment with Piston Assembly

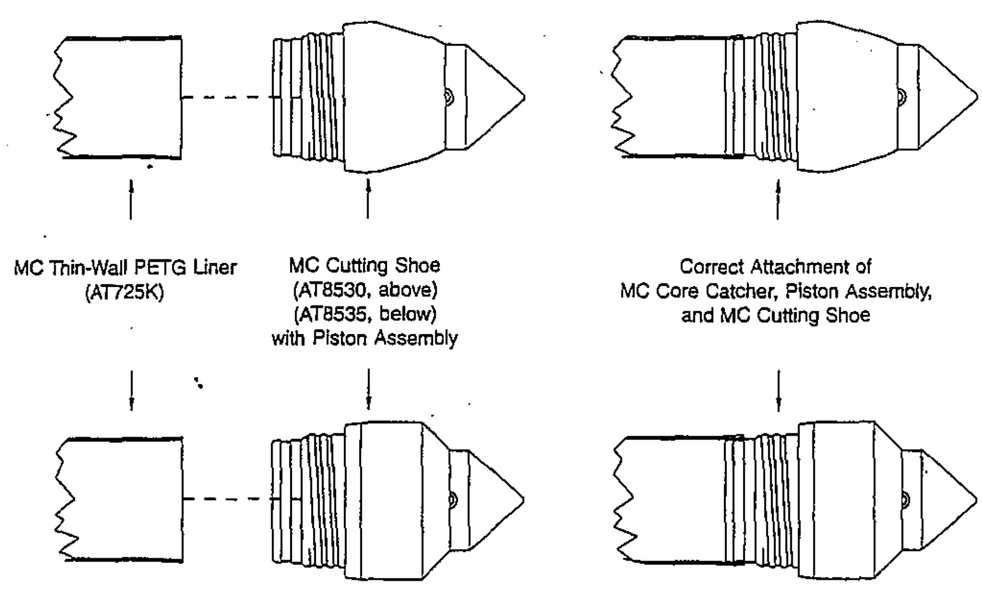



FIGURE 4.10
Macro-Core® Thin-Wall PETG Liner Attachment with Piston Assembly



GMEI-00181

9b. **Without Core Catcher.** Push the base of an MC Spacer Ring onto the threaded end of a cutting shoe until it snaps into place (Fig. 4.11).

**NOTE:** With the exception of AT725K (thin-wall PETG) liners, all liners must utilize either a spacer ring or core catcher. PETG liners have a swedged end which slides directly over the end of the cutting shoe. When using PETG liners, attach the liner to the cutting shoe (Fig. 4.10) before proceeding to Step 10.

10. Thread the cutting shoe into one end of an MC Sample Tube (Fig. 4.12). Tighten until the end of the sample tube contacts the machined shoulder of the cutting shoe.

11. Insert the appropriate liner into the sample tube (Fig. 4.12). (The liner is all ready installed if using PETG liners without a core catcher.)

12. Connect a drive head to the top of the sample tube (Fig. 4.12) and securely tighten with the combination wrench (Fig. 4.5) until the end of the sample tube contacts the machined shoulder of the drive head.

### 4.5 Pilot Hole

A pilot hole prevents excessive sampler wear in tough soils and saves time when a discrete soil core is desired. The pilot hole is created by driving a 2.0-, 2.5-, or 3.0-inch MC Pre-Probe (see page 6 for part numbers) to the top of the sampling interval. Soil surfaces containing gravel, asphalt, hard sands, or rubble should be pre-probed to reduce wear on the cutting shoe and to avoid damage to the sampler. To save time when collecting a discrete soil core, pre-probe to the sampling interval rather than coring to depth with the sampler.

### 4.6 Open-Tube Sampling

The Macro-Core Open-Tube Sampler is used to gather continuous soil cores from the surface to depths exceeding 30 feet. A representative soil sample is obtained by driving the sampler one sampling interval from ground surface into undisturbed soil. Upon retrieving the sampler, the liner and soil core are removed. The sampler is then properly decontaminated, reassembled with a new liner, and inserted back down the same hole to take the next soil core.

The Macro-Core Cutting Shoe is tapered to minimize the amount of soil scraped from the core walls when inserting the sampler back down an existing hole. In spite of this, non-cohesive soils will often collapse to the bottom of the hole. This slough material then enters the sampler as the next soil core is collected, resulting in a non-representative sample. A Closed-Piston Macro-Core Sampler is required under such conditions. Instructions for sampling with the Open-Tube Macro-Core Sampler follow.

1. Attach a drive cap to the sampler drive head of an assembled Open-Tube Macro-Core Sampler (Section 4.3).

2. Install a hammer anvil and anvil retainer cap assembly. Raise the hammer latch while driving the Macro-Core Sampler to avoid contact with the drive head.

3. Raise the hammer assembly to its highest position by fully extending the probe cylinder. ~~If using a 48-~~ inch or 1-meter sample tube with a Geoprobe Model 4200, 4220, or 420U Probe Unit, raise the machine— foot to allow sufficient room to position the sampler below the hammer.

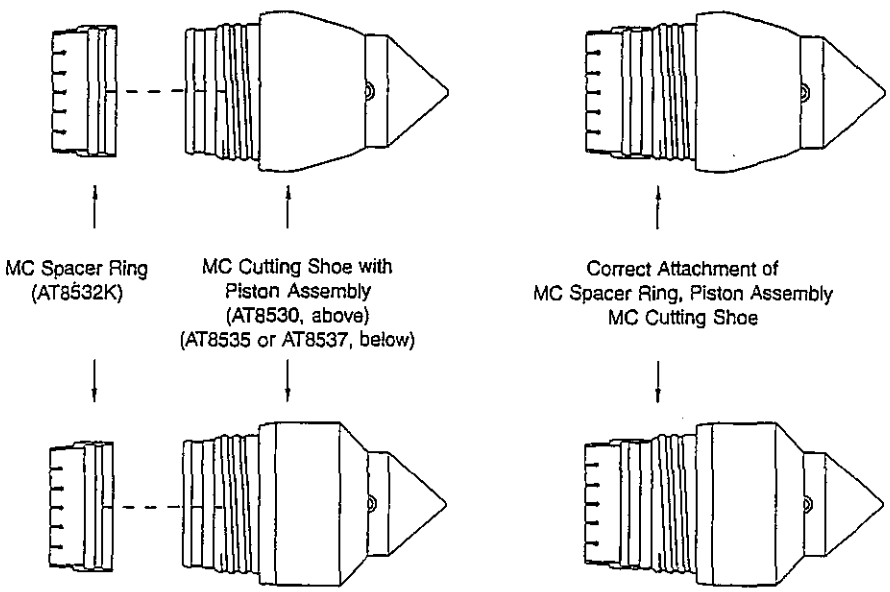



FIGURE 4.11
Macro-Core® Spacer Ring Attachment With Piston Assembly

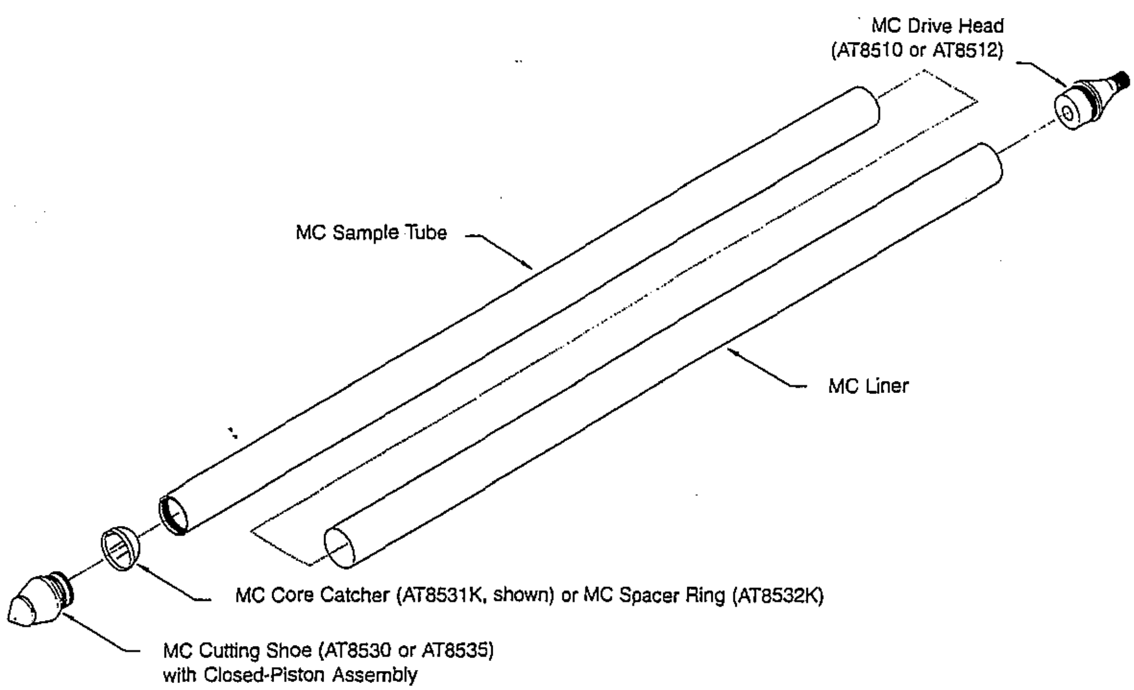



FIGURE 4.12
Macro-Core® Closed-Piston Sampler Assembly



GMEI-00183

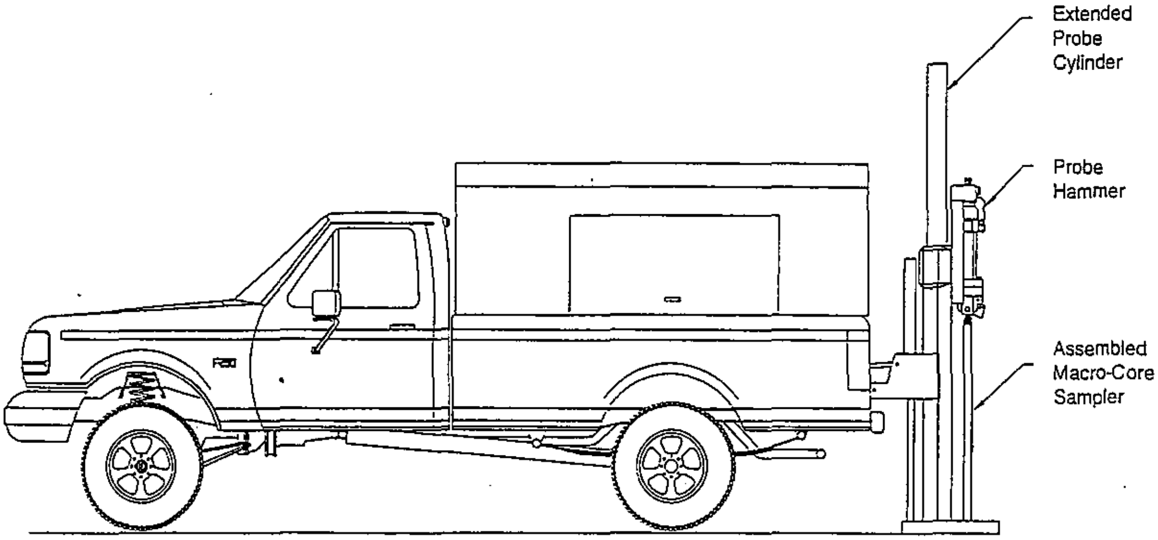



FIGURE 4.13
Macro-Core® Soil Sampler in Driving Position



GMEI-00184

4. Place the sampler in the driving position (Fig. 4.13). The sampler should always be positioned parallel to the derrick axis.

5. If using a 48-inch or 1-meter sampler tube with a Geoprobe Model 4200, 4220, or 420U Probe Machine, begin applying downward force on the sampler by lowering the machine foot. When the foot contacts the ground surface, apply downward force with the probe cylinder control only. All other Geoprobe units may start initially with the probe cylinder control.

   GEOPROBE TIP: **Activate the hammer whenever collecting soil. Hammering forces soil into the sample tube and increases recovery.**

6. Drive the sampler until the drive head reaches the ground surface (Fig. 4.14A).

***CAUTION**

**Some soil conditions may warrant using an MC Pre-Probe before attempting to collect a soil core. Damage may occur if the sampler is driven into rock or any other impenetrable layer.**

7. To sample at consecutive intervals, push a sampler down the previously opened hole (Fig. 4.14B) until the top of the next sampling interval is reached (Fig. 4.14C). Drive the tool string another sampling interval to fill the sampler with soil (Fig. 4.14D). An open-tube sampler may be used for consecutive sampling or, if soil slough is expected, a closed-piston sampler is available.

***CAUTION**

**All parts must be completely threaded together before being driven. Driving an improperly assembled sampler will result in component damage.**

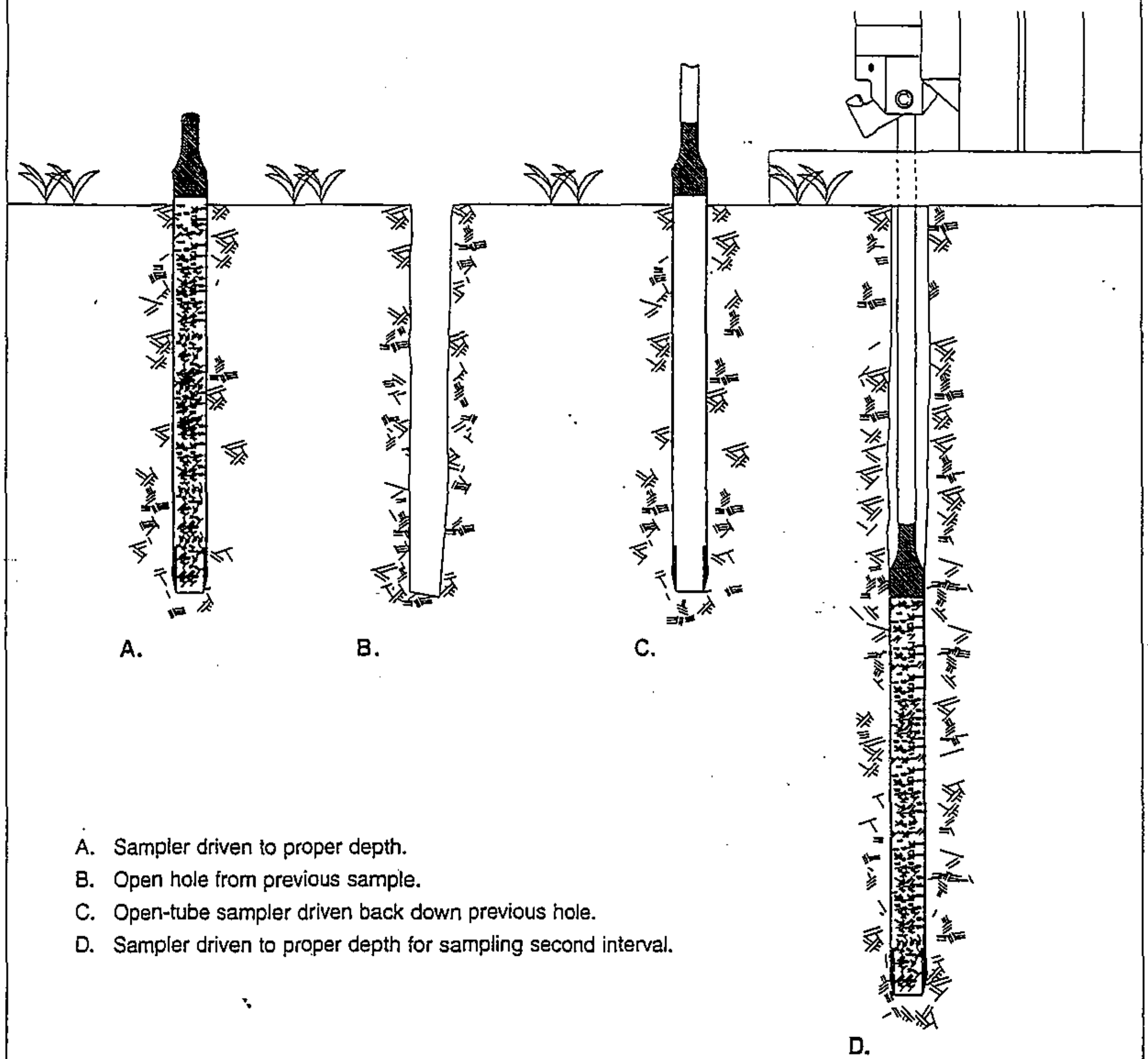
8. Retrieve the sampler as described in Section 4.8: Sampler Retrieval.

### 4.7 Closed-Piston Sampling

It is often difficult to collect representative soil cores from significant depths with an open-tube sampler due to soil slough. Because of this, the Macro-Core sampler can be equipped with a piston which locks into the cutting shoe. This allows the sealed sampler to pass through the slough material and be opened at the appropriate sampling interval.

NOTE: **The closed piston system is meant to be inserted through previously opened holes. It is not designed to be driven from the surface through undisturbed materials.**

The MC Closed-Piston System can be used only with AT8500 series Macro-Core tools. The AT8500 series replaces the AT720 series Macro-Core tools.




A. Sampler driven to proper depth.
B. Open hole from previous sample.
C. Open-tube sampler driven back down previous hole.
D. Sampler driven to proper depth for sampling second interval.

FIGURE 4.14
Phases of Macro-Core® Open-Tube Soil Sampling



GMEI-00186

1. Attach a drive cap to the drive head of an assembled Closed-Piston Macro-Core Sampler (Section 4.4).

2. Install a hammer anvil and anvil retainer cap assembly. Raise the hammer latch while driving the sampler to avoid contact with the drive head.

3. Raise the hammer assembly to its highest position by fully extending the probe cylinder. If using a 48-inch or 1-meter sample tube with a Geoprobe Model 4200, 4220, or 420U Probe Unit, raise the machine foot to allow sufficient room to place the sampler below the hammer.

4. Place the sampler tip in the **previously opened hole** (Fig. 4.15A). Lower the probe until the hammer anvil contacts the sampler drive head.

5. If using a 48-inch or 1-meter sample tube with a Geoprobe Model 4200, 4220, or 420U Probe Machine, begin applying downward force on the sampler by lowering the machine foot. When the foot contacts the ground surface, apply downward force with the probe cylinder control only. All other Geoprobe units may start initially with the probe cylinder control.

6. Drive the sampler until it reaches the desired sampling interval (Fig. 4.15B). Add probe rods as needed.

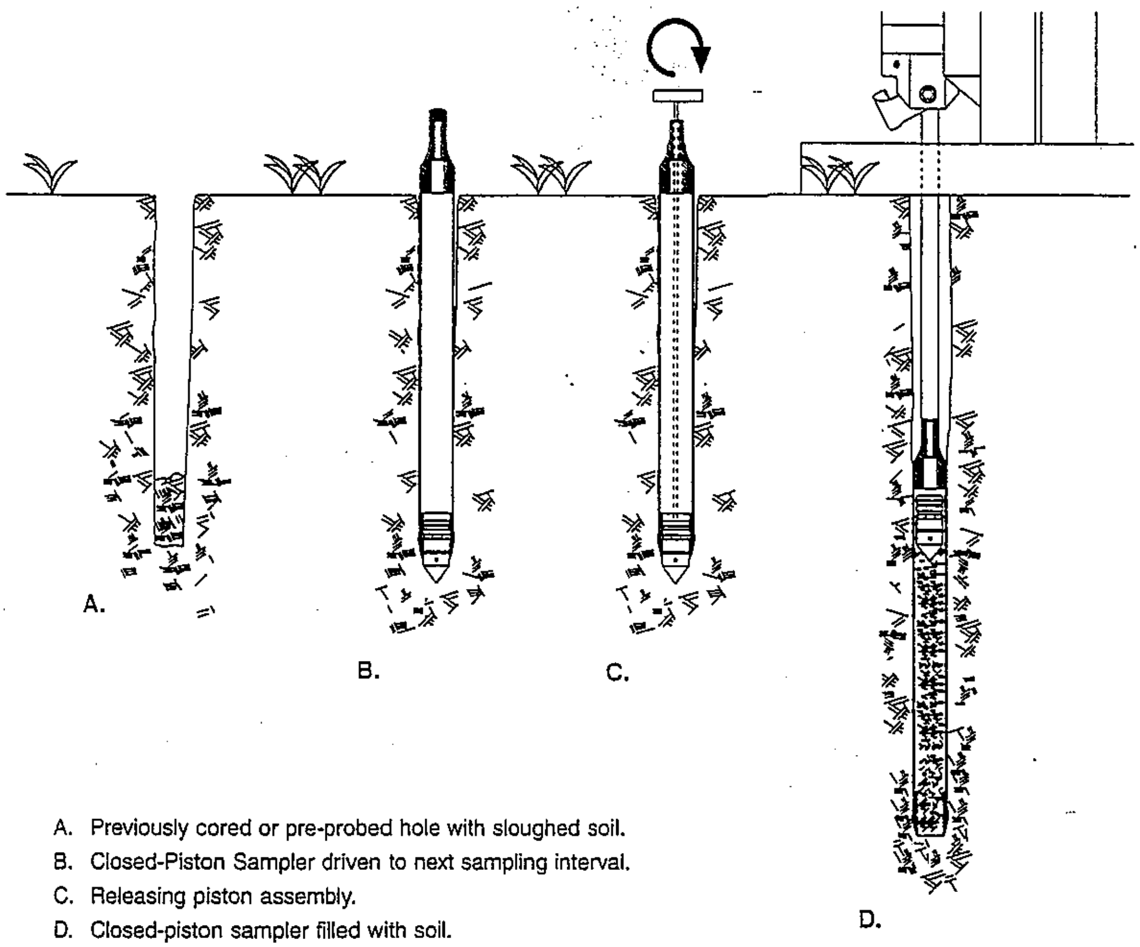
***CAUTION**

**Care should be taken when driving the Macro-Core Sampler down a previously opened hole. Low side friction may allow the sampler and probe rods to drop down the hole. To prevent equipment loss, attach a pipe wrench to the top of the rod string when advancing or retrieving the sampler.**

7. Move the probe unit away from the top of the probe rods to allow room for work.

8. Remove the drive cap and insert an MC Piston Release Rod (Fig. 3.1) down the inside of the probe rods (Fig. 4.16). (Refer to Fig. 4.19 for identification of extension rod accessories.) Hold onto the release rod and attach an Extension Rod Coupler or Extension Rod Quick Links. Attach an Extension Rod to the release rod (Fig. 4.17) and lower the jointed rods down hole. Continue adding extensions until the release rod contacts the bottom of the sampler. The operator may opt to use the Extension Rod Jig to hold the down-hole extension rods while adding additional rods.

9. Attach an Extension Rod Handle to the top extension rod and slowly rotate the handle clockwise (Fig. 4.15C and 4.18). The release rod will drop into the groove in the piston bolt (Fig. 4.20). The operator should feel the extension rods move slightly as the release rod falls into the groove. Rotate the handle clockwise approximately four complete revolutions. Resistance to rotation is generally noted at this point. If the rods continue to rotate, however, do not continue for more than four complete revolutions. The piston assembly is now released and will be pushed to the top of the sampler as the liner is filled with soil (Fig. 4.15D).




A. Previously cored or pre-probed hole with sloughed soil.
B. Closed-Piston Sampler driven to next sampling interval.
C. Releasing piston assembly.
D. Closed-piston sampler filled with soil.

FIGURE 4.15
Phases of Macro-Core® Closed-Piston Soil Sampling



GMEI-00188

Figure 4.16. MC Release Rod is inserted down inside of the probe rods.

Figure 4.17. Extension Rods are attached to the MC Piston Release Rod using Extension Rod Quick Links.

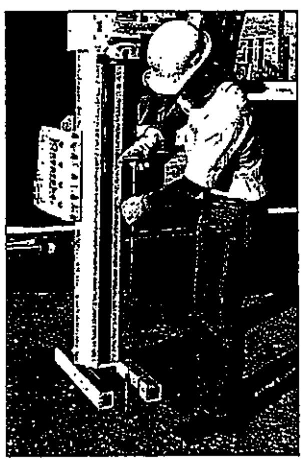


Figure 4.18. Extension Rods are rotated clockwise to release the MC Piston assembly.

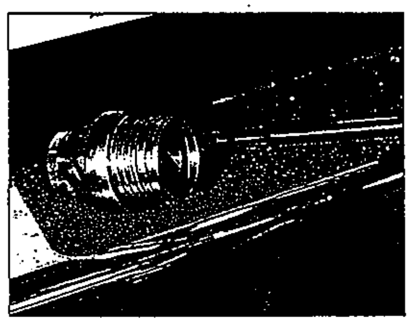


Figure 4.20. MC Release Rod fits into groove in MC Piston Bolt Head.

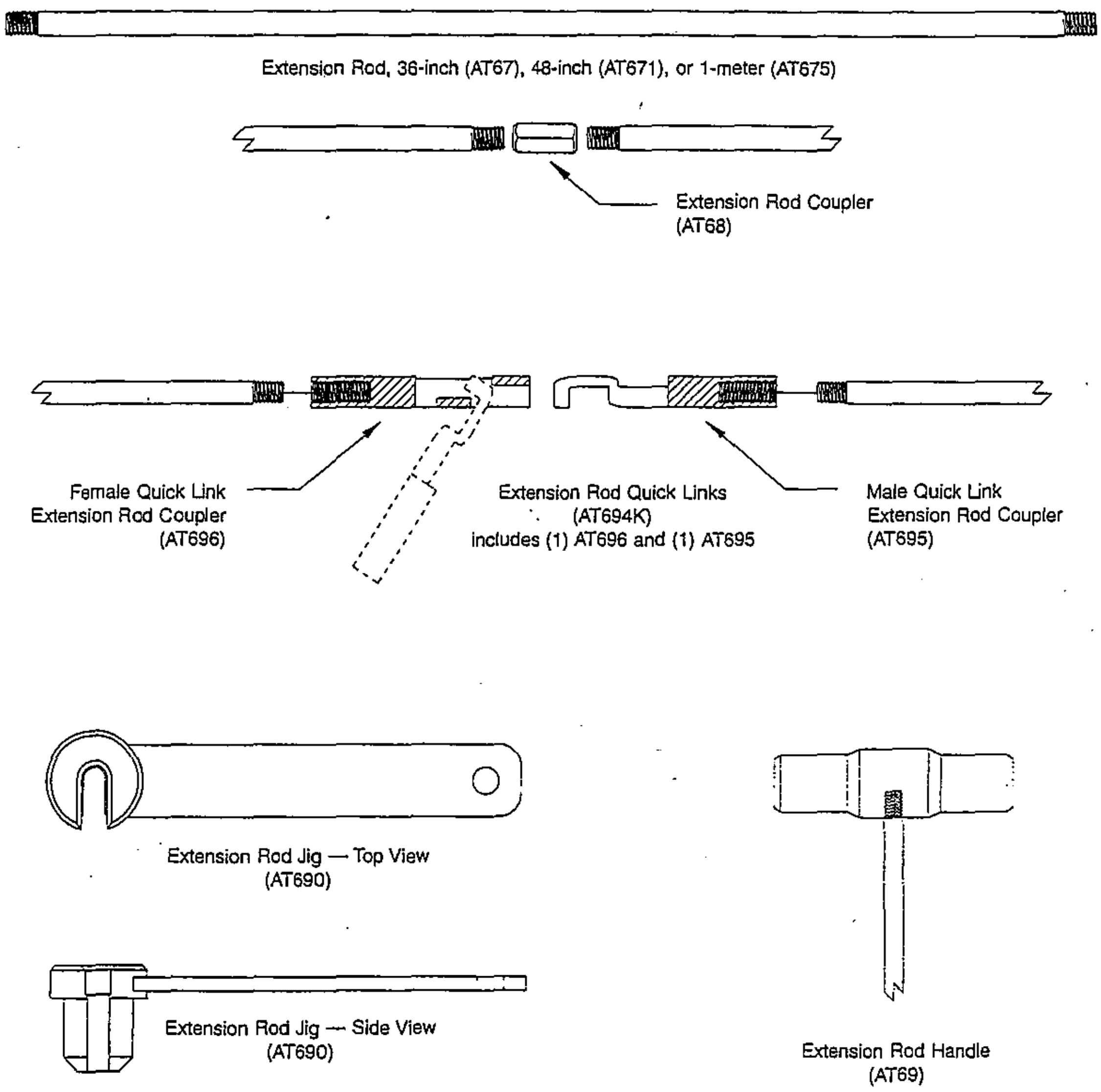



FIGURE 4.19
Geoprobe Extension Rods and Accessories

10. Remove the release rod and extension rods. The piston assembly will not be attached to the end of the extension rod but will remain inside the sample tube.

11. Add a probe rod to the tool string, attach the drive cap, and reposition the probe unit. Drive the tool string another sampling interval to fill the liner with soil. Do not over-drive the sampler.

    GEOPROBE TIP: **Activate the hammer whenever collecting soil. Hammering forces soil into the sampler tube and increases recovery.**

4.8 Sampler Retrieval

1. Attach a pull cap to the top probe rod. Close the hammer latch over the pull cap and pull the tool string up one rod length by actuating the PROBE control lever.
2. Remove the rod and repeat Step 1 until the sampler drive head is just above the ground surface. Probe rods are sometimes difficult to loosen by hand. Use pipe wrenches to free tight threads.

***CAUTION**

**Care should be taken when retrieving the Macro-Core sampler. Low side friction may allow the sampler and probe rods to drop down the hole. Attach a pipe wrench to the top of the rod string to prevent equipment loss.**

3. Attach the pull cap to the sampler drive head (Fig. 4.21). Pull the sampler out of the ground (Fig. 4.22) by raising the PROBE control lever. If using a 48-inch or 1-meter sample tube with a Geoprobe Model 4200, 420U, or 4220 Probe Machine, the probe cylinder will fully extend before the sampler is completely free. Attempt to raise the sampler by actuating the FOOT control.

***CAUTION**

**The rear of the carrier vehicle may be pulled downward as the foot cylinder is activated if the sampler is lodged tightly in the ground. Damage to the unit base frame may occur under such circumstances.**

If the sampler cannot be retrieved without excessive resistance, follow these steps:

1. Lower the FOOT control and disengage the hammer latch from the pull cap.
2. Raise the probe foot at least 12 inches (305 mm) above the ground surface. Stack several boards or place timber blocks under the foot to act as a foot extension.
3. Lower the hammer assembly and close the hammer latch over the sampler pull cap.
4. Use the PROBE control to lift the sampler completely out of the ground.

### 4.9 Soil Core Recovery

The soil sample is easily removed from the Macro-Core Sampler by unscrewing the cutting shoe and pulling out the liner. A few sharp taps on the cutting shoe will often loosen the threads sufficiently to allow removal by hand. If needed, the exterior of the cutting shoe features a notch for attaching the combination wrench to loosen tight threads (Fig. 4.23). With the cutting shoe removed (Fig. 4.24), simply pull the liner and soil core from the sample tube (Fig. 4.25).

If the closed-piston sampler is used, the piston assembly is now retrieved from the end of the liner (Fig. 4.26). Secure the soil sample by placing a vinyl end cap on each end of the liner.

Undisturbed soil samples can be obtained from Teflon®, PVC, and PETG liners by splitting the liner. Geoprobe offers two tools for cutting sample liners. The MC Liner Cutter Kit (AT8000K) is used to make longitudinal cuts in the liner and includes a tool that holds the liner for cutting. The MC Liner Circular Cutting Tool (AT8050) is used to segment the liner by cutting around the outside circumference of the liner. Refer to Figures 4.27 and 4.28 for more information on liner cutting.

**Figure 4.21. Pull Cap attached to MC Drive Head.**

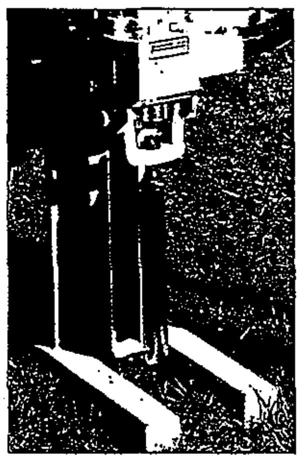


**Figure 4.22. MC Soil Sampler is pulled with Geoprobe unit.**

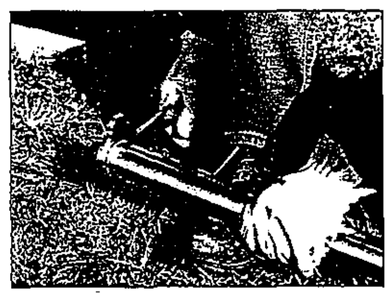


**Figure 4.23. Loosening the MC Cutting Shoe with the MC Combination Wrench.**

**Figure 4.24. Removing MC Cutting Shoe and liner from MC Sampler Tube.**

**Figure 4.25. Macro-Core liner filled with soil core.**

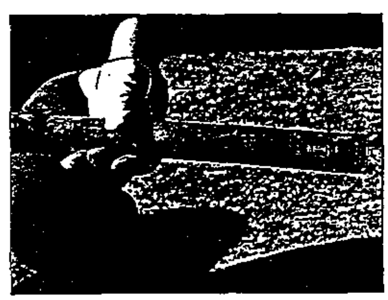


**Figure 4.26. MC Piston assembly is retrieved from ~~liner at the~~ top of the soil core.**



GMEI-00192

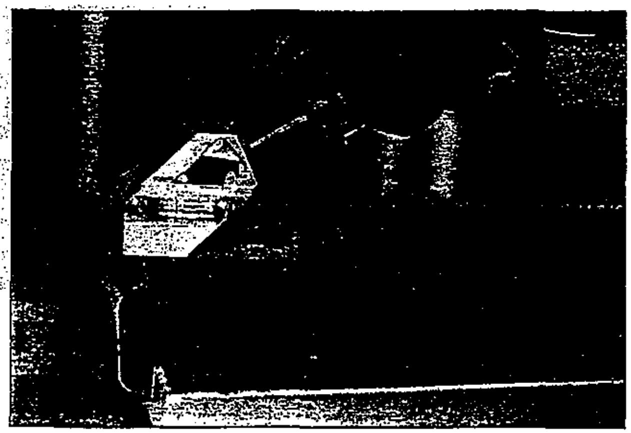


Figure 4.27. MC Liner Cutter (AT8000K) makes a quick, safe cut through even the toughest of liner materials.

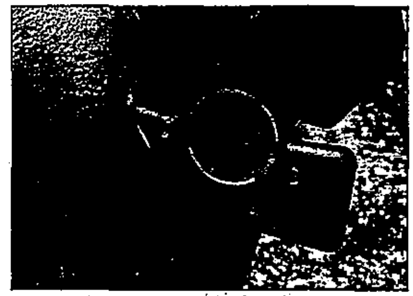


Figure 4.28. MC Circular Cutting Tool (AT8050) cuts around the outside of the filled MC liner.

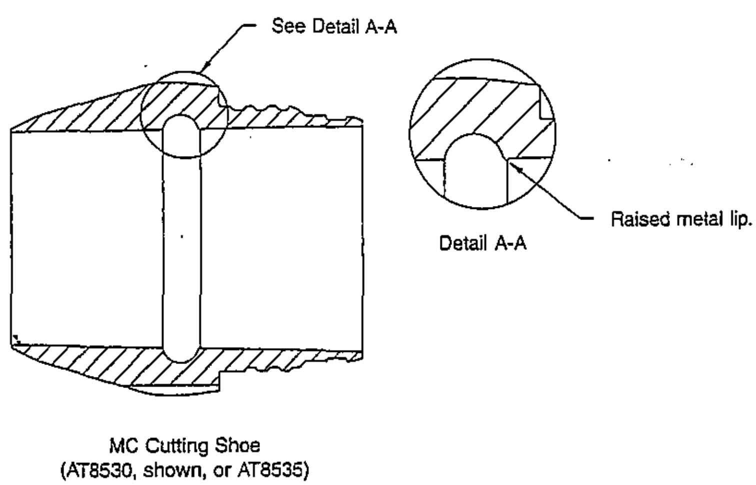



FIGURE 4.29
Macro-Core® Cutting Shoe with Mushroomed Locking Ring Groove



GMEI-00193

### 4.10 Macro-Core Closed-Piston Operating Tips

The Macro-Core piston assembly requires proper maintenance to ensure reliable operation. The following tips will increase the effectiveness of closed-piston sampling:

1. Cleanliness is the most important factor affecting piston operation. Ensure piston bolt threads and locking ring are free of soil particles and corrosion before each use. Completely thread and unthread the piston bolt to verify operation. Disassemble the piston tip and wash the individual parts using clean water and a Nylon Brush for MC Sample Tubes (BU700) if necessary. Allow parts to dry before assembling if piston is to be stored before use. Disassemble used pistons before storing to prevent piston bolt corrosion.

2. Never store a cutting shoe with the piston installed. Install the piston assembly immediately before sampling.

3. Lubricate piston assembly with distilled water before installing in the cutting shoe.

4. Once the assembly is fully seated in the cutting shoe, tighten the piston bolt with an oscillating movement; thread the bolt in 90 degrees then back 45 degrees. When the end of thread travel is reached, work the last 30 degrees of travel back and forth several times. Tightening the piston bolt in this manner allows the metal pins of the locking ring to correctly align in the cutting shoe.

5. Do not lock the piston bolt 100 percent counterclockwise. Fully tighten the bolt and then loosen approximately 10 degrees.

6. When releasing the piston downhole, only turn the piston bolt 4 clockwise revolutions.

7. Clean the piston assembly with distilled water and a nylon brush between samples. It is not necessary to completely disassemble the piston at this time. Pay particular attention to the locking ring and ensure that all sand and grit is removed from between the metal lock pins.

8. Locking rings are expensive but can be restrung on new springs. If a locking ring breaks, save the pieces for reuse. (Refer to Page 6 for replacement parts). To restring a locking ring, follow these simple steps:

   a. There is a small loop at each end of a new locking ring spring. Make sure one loop is bent perpendicular to the other. One loop should also be completely closed while the other is slightly open.

   b. Attach a clamp as close to the open end as possible (without contacting the loop) to hold the spring. Fisherman fly-tying pliers work well for this procedure. Take care not to damage the spring by applying too much pressure.

   c. String 12 locking ring pins (macaroni-shaped metal pieces) on the closed end, stretching the spring as necessary. Be careful not to overstretch and damage the spring.

   d. Hook the open end of the spring through the closed end and bend the loop closed.

   e. Remove the clamp and gently stretch the locking ring several times to ensure that the loops will not open.

9. A locking ring groove is machined into the cutting shoe. Over time, the edges of this ~~groove may~~ begin to mushroom from use (Fig. 4.29). The raised metal lip formed by the mushroomed groove may cause the locking ring (and subsequently the piston) to bind in the cutting shoe. Remove the raised metal with a file or die grinder

## 4.11 Tips to Maximize Sampling Productivity

~~The following~~ suggestions ~~are based~~ on the collective experiences of Geoprobe operators:

1. Organize your truck or van to maximize efficiency. Assign storage areas to all tools and equipment for easy location. Store samplers, extension rods, and liners in racks. Above all, minimize the number of items lying loose in the back of the vehicle.

2. Take three or four samplers to the field. This allows the collection of several samples before stopping to clean and decontaminate the equipment. A system is sometimes used where one individual operates the probe while another marks the soil cores and decontaminates the used samplers.

3. A machine vise is a real plus. With the sampler held in a vise, the operator has both hands free to remove the cutting shoe (Fig. 4.30), drive head, and sample liner (Fig. 4.31). Cleanup is also easier with both hands free. Geoprobe offers an optional Machine Vise (FA300) which mounts directly on the probe derrick (Fig. 4.32).

4. Extension Rod Quick Links (Fig. 4.33) are the best choice among connectors. These are real time savers. The quickest and easiest method for deploying extension rods is to assemble sections of up to three rods with threaded connnectors. Each section is then connected with Quick Links. Up to three rods can be inserted or removed from the probe string at once, greatly reducing deployment time.

5. When releasing the piston assembly, a pair of locking pliers may be used to turn the extension rods. The locking pliers will be quicker and easier to install than the extension rod handle in some situations.

6. Organize your worksite. The best way to maximize sampling efficiency is to practice with the sampler and identify a comfortable setup. Lay out all tools and equipment before probing. An example layout is shown in Figure 4.34.

   A collapsible table or stand is handy to hold decontaminated sampler tubes and liners. Equipment may also be protected from contamination by placing it on a sheet of plastic on the ground.

   Keep probe rods separate by identifying a location for "new" rods as well as a "put down pile." Initially drive the sampler with a new rod. As the rod is removed during sampler retrieval, place it in the put down pile for reuse. Drive the sampler to the top of the next sampling interval by using all of the rods in the put down pile. A new rod (located in a separate pile) is added and the string is driven to collect the next soil core. Once again, each probe rod is removed and placed in the put down pile as the sampler is retrieved. The cycle is repeated until all of the soil cores are recovered. This method eliminates the need to count rods while driving the sampler.

7. Cleanup is very important from the standpoint of operation as well as decontamination. Remove all dirt and grit from the threads of the drive head, cutting shoe, and sample tube with a nylon brush (BU700). Without sufficient cleaning, the cutting shoe and drive head will not thread completely onto the sample tube. The threads may be damaged if the sampler is driven in this condition.

   Ensure that all soil is removed from inside the sample tube. Sand particles are especially troublesome as they can bind liners in the sampler. Full liners are difficult to remove under such conditions. In extreme cases the soil sample must be removed from the liner before it can be freed from the sample tube.

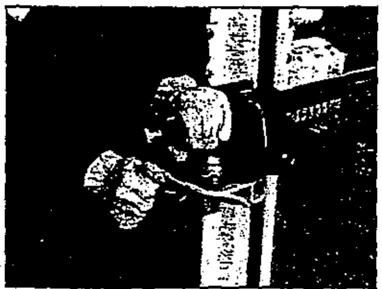


Figure 4.30. Removing MC Cutting Shoe with filled sampler tube held in Machine Vise.

Figure 4.31. Removing filled liner with sampler tube held in Machine Vise.

Figure 4.33. Machine Vise mounted directly on Geoprobe unit.

Figure 4.33. Using Extension Rod Quick Links to connect Extension Rods.

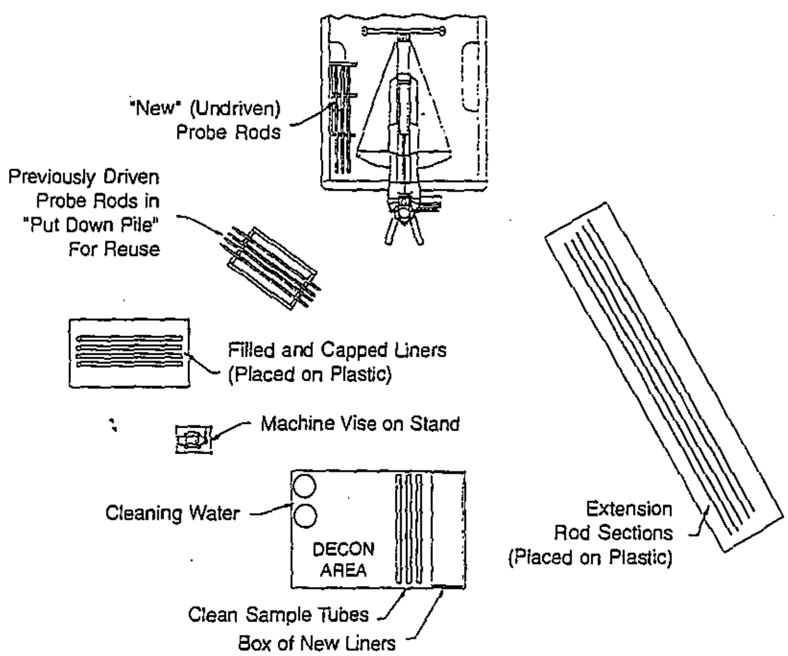



FIGURE 4.34
Equipment Layout Example to Maximize Sampling Productivity.



GMEI-00196

8. The piston assembly may remain lodged in the cutting shoe when disassembling by hand, even though the piston bolt is completely loosened. This is because the locking ring and piston washer do not release from the groove in the cutting shoe as the piston bolt unthreads out of the tip. Hammering on the piston tip will have no effect because you are, in essence, forcing the tip tighter against the locking ring. To dislodge the piston, turn the assembly over and tap the top of the cutting shoe on a solid object. If the assembly still does not release, tap on the piston bolt with a hammer (taking care not to damage the release rod slot). This will jar the piston tip and bolt enough to release the locking ring from the groove in the cutting shoe.

***CAUTION**

**Do not push the piston assembly out of the cutting shoe by placing your hands on the piston tip. The cutting shoe is sharp and may cause injury when the assembly suddenly comes free. It is best to place the tip against a solid object, grasp the cutting shoe, and push the shoe over the assembly.**

9. Although available for use with two sizes of probe rods, 1.25-inch OD rods are recommended for the Macro-Core Sampler. The larger rod diameter limits downhole deflection of the tool string and ultimately provides a more durable system. A new thread design also makes the 1.25-inch rods quicker and easier to thread together than previous 1-inch probe rods.

10. The Heavy-Duty MC Cutting Shoe (AT8535) is machined with more material at the critical wear areas. It can be used in place of the Standard MC Cutting Shoe (AT8530) and is designed to lengthen service life under tough probing conditions.

    Expansive clays and coarse sands can "grab" and collapse liners as the sample tube is filled with soil. A 1/8-inch Undersized MC Cutting Shoe (AT8537) will help alleviate this problem. The smaller diameter core (1.375 inches) allows expanding clays and coarse sands to travel up the sample liner without binding. The piston assembly can not be used with this cutting shoe.

11. Maximize the thread life of the sample tube by varying the ends in which the drive head and cutting shoe are installed. The dynamic forces developed while driving the sampler are such that the threads at the drive head wear more quickly than at the cutting shoe. Regularly switching ends will maintain relatively even wear on the sample tube.



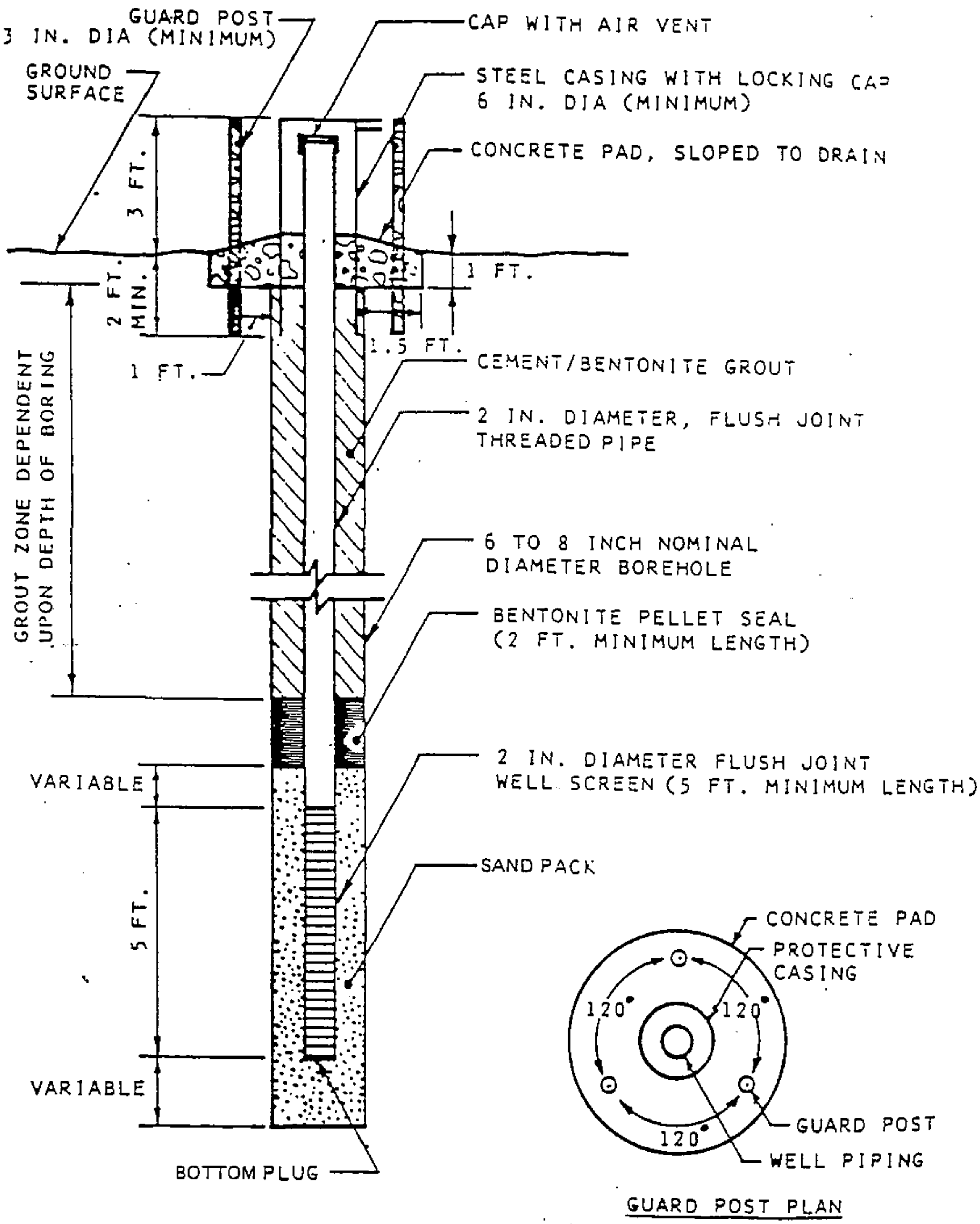
GMEI-00197

# APPENDIX B:

**Monitoring Well Construction Diagrams**

*36 Sylvester Street Site No. 1-30-043U*
*Westbury, New York*
*00-096*

TYPICAL MONITORING WELL INSTALLATION



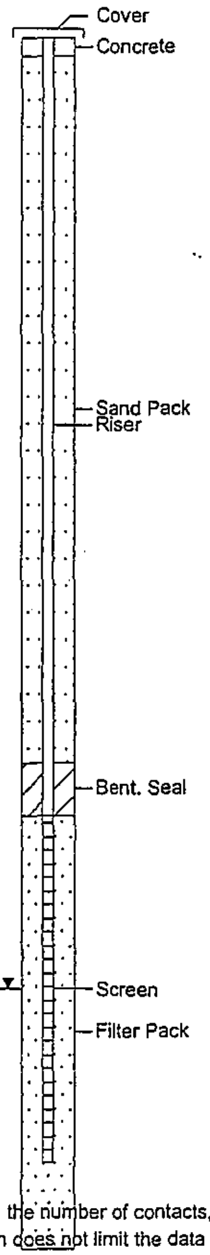

Taken from USEPA "A Compendium of Superfund Field Operation Methods", 1987

# APPENDIX C:

**Monitoring Well Boring Log**
*36 Sylvester Street Site No. 1-30-043U*
*Westbury, New York*
00-096

| Impact Environmental | LOG OF BORING MW-1 (Page 1 of 1) |
|---|---|
| Remedial Investigation<br>36 Sylvester Street Site No. 1-30-043U | Date Drilled :<br>Equipment :<br>Surface Elevation :<br>Logged By : |

| Depth in Feet | REMARKS | Water Levels | USCS | Well: MW Elev.: | DESCRIPTION | GRAPHIC | Formation |
|---|---|---|---|---|---|---|---|
| 0 | | | | | SAND, Well Graded, | | |
| 10 | | | | | | | |
| 20 | | | | | | | |
| 30 | | | GW | | | | |
| 40 | | | | | | | |
| 50 | | | | | | | |
| 60 | | | | | | | |
| 70 | | | | | | | |




For this demonstration version, the number of contacts, samples, and general parameter data points are limited to 5, 5, and 10. The full version does not limit the data this way.

05-01-2000 C:\KEVIN'S DOCUMENTS\CURRENT\00-096 WESTBURY\00-096.BOR

GMEI-00201

# APPENDIX D:

**Chemtech, Inc. Statement of Qualifications**

*36 Sylvester Street Site No. 1-30-043U*
*Westbury, New York*
*00-096*

CHEMTECH

# STATEMENT

# OF

# QUALIFICATIONS

# TABLE OF CONTENTS

## Introduction

Chemtech, is a privately held, minority owned company incorporated in the State of New York. With guidance from our directors, and the dedication and experience of our management team, Chemtech has developed into a profitable multi-discipline environmental services company. Our directors, many of who are also major shareholders are acutely aware of the dynamics of our industry, the changing technology, and need for capital investment. Capital for investment in technology and expansion is mainly derived from operating profits and our shareholders. We have been successful in acquiring the necessary equipment, software and automation necessary to be a leader in the analytical community.

Chemtech provides comprehensive analytical testing services for the identification and assessment of environmental contaminates. Our services are used to meet various regulatory permitting and reporting requirements, determine compliance with both State and Federal environmental regulations and assess potential present or future environmental liabilities.

Our laboratories are designed for maximum efficiency and safety. They are equipped with state of the art automated instrumentation and computerization. Our technical staff is a highly skilled group of degreed chemists with diversified experience in environmental analysis, managed by a knowledgeable team of professionals who are dedicated to quality and customer satisfaction.

Our capabilities and technical experience extend beyond the analysis of the routine Priority Pollutants or Target Compound List of constituents. We are often called upon to design and implement analytical schemes for identifying and quantifying the presence of non-routine, unusual or esoteric compounds.

Our extensive laboratory facilities and technical expertise enable Chemtech to routinely meet our customers needs and produce timely analytical data of impeccable quality.

Chemtech's advantage lies in its commitment and ability to providing the most sophisticated accurate and timely analytical services, designed to aid and simplify it customers compliance needs at a reasonable cost.

To obtain more information regarding our environmental services, qualifications, prices, and to discuss your specific requirements, please call Mr. Joe Dockery at (732) 225 - 4111 ext 104 or Cell# (201) 538-2700.

## 1.0 CAPABILITIES:

Chemtech is one of the original participants in the Environmental Protection Agency's Superfund Contract Laboratory Program (CLP), and is a multi-state certified laboratory for drinking water, ground and surface water, industrial effluent and wastewater, air, contaminated soil and solid/hazardous waste analysis. Capabilities include a variety of analytical methodologies in classical methods, metals, inorganic, microbiology and volatile and semi-volatile organic, Pesticides, PCB's, Herbicides and much more. The laboratory is available for operation in three shifts, 24 hours a day and 7 days a week, to provide timely and high-quality data.

**Laboratory services include:**

- Field Services and Sample Collection
  - Monitoring Wells
  - Air Sampling and Monitoring
  - Influent and Effluent, Water and wastewater
- Sample Control and Preparation
- Analysis
  - Metals (AA, ICP, CV, Hydride)
  - Organics (GC, GC/MS, HPLC, IR, TOC, TOX)
  - Classical & General Chemistry
- Waste Characterization and Treatability
- Data Management & Reporting
  - Standard, Tier I & Tier II
  - EPA, Superfund CLP
  - NYSDEC, ASP
  - Electronic Data Deliverables
  - Data Archival
- Data Validation
  - EPA & EPA Region II Certified Validation

- NYSDEC, ASP Validation

■ Legal and Regulatory Enforcement

### 1.1 Field Services and Sample Collection

Proper sample collection is critical to the integrity of the data resulting from analyses. Chemtech provides proper sample containers and preservatives as per the governing regulations to assist the client with proper sample collection.

Each sample collection kit includes a cooler containing all the necessary labeled bottles, Custody seals, Chain of Custody forms, preservatives and directions.

If preferred, Chemtech's field technicians can collect or direct the collection of air, water and soil samples.

### 1.2 Sample Control and Preparation

If sampling is performed by the client, samples are either picked up by our delivery staff or received by overnight couriers. If Chemtech is collecting the samples, they are delivered to the laboratory by the sampling staff. The sample control area is equipped with walk-in coolers (4° C) and dry storage areas for used and unused samples. The samples remain under stringent chain-of-custody control throughout the preparation, analysis and disposal process.

After analysis, any unused portion of sample, digestion or extract volumes are returned to Sample Control for storage or return to the customer. After the 30 days storage time, samples are properly disposed by licensed waste management companies in federally approved facilities.

## 1.3 Laboratory Analytical Services

As a full service environmental laboratory, Chemtech is capable of analyzing samples by a variety of methodologies, using various instrumentation and classical techniques.

### 1.3.1 Metals

#### 1.3.1.a. Atomic Absorption Spectroscopy (AA):

After the sample preparation is completed, determination of trace concentrations of inorganic elements is performed by Atomic Absorption Spectroscopy (AA), either by Flame, Cold Vapor or Furnace techniques.

#### 1.3.1.b Inductively Coupled Argon Plasma Spectroscopy (ICAP):

A majority of metals analyses are performed by ICAP simultaneous instrumentation. This technique can analyze each sample for up to 30 metallic elements in a single aspiration. Analytical tests routinely performed by ICAP include:

- Total Characteristic Leaching Procedure (TCLP) Metals
- Priority Pollutant Metals (PPM)
- NYSDEC, ASP
- Appendix IX Metals
- Target Analyte List (TAL) Metals (CLP and SW 846)
- Primary and Secondary Drinking Water Metals
- Metals Speciation

### 1.3.2 Organic

#### 1.3.2.a Gas Chromatography/Mass Spectrometry (GC/MS)

Gas chromatography combined with a mass spectrometer detector is the most powerful tool for accurate identification and quantification of complex mixtures of organic compounds. This technique is widely used in analysis of groundwater, wastewater and soil for industrial pollutants, and in special concerns where the identity of unknown but suspected trace organic contaminants must be determined.

Chemtech offers many customized analytical services as well as the following types of standard services and analytical methods:

- USEPA Contract Laboratory Program (CLP) Methodologies
- US EPA Superfund CLP, Target Compound List Analyses (TCL)
- New York State DEC Superfund ASP Organic Analyses
- Solid Waste Manual Methodologies (SW846-8000 Series)
- Priority Pollutant Analyses (US EPA 600 Series)
- Drinking Water Analyses (US EPA 500 Series)
- Appendix IX Organic Analyses
- Identification of Tentative Compounds (TICs)

### 1.3.2.b Gas Chromatography (GC)

Chemtech is capable of performing many GC methods for analysis of samples suspected of containing pesticides or PCBs, or other known organic substances as a less expensive and often more sensitive (lower detection limit) alternative to GC/MS methods. Chemtech has six Gas Chromatographs with a wide range of detectors, including Halls Electrolytic Conductivity, Electron Capture, Flame Ionization and Photoionization.

All GC's are equipped with autosamplers and are integrated into a computerized data management system. These instruments are generally used for analyzing many types of organic compounds, including:

- Halogenated Volatile Organics (EPA 601, 8010)
- Aromatic Volatile Organics (EPA 602, 8020)
- Halogenated and Aromatic Volatile Organics (8021)
- Pesticides and PCB's (EPA 608, 8081/8082)
- PCB Congeners (8082)
- Chlorinated Herbicides (EPA 615, 8151)
- Organophosphorus Pesticides (EPA 8140)
- Gasoline and Diesel Range Organics (GRO/DRO EPA 8015M)
- USEPA Contract Laboratory Program Methodologies (CLP)
- NIOSH Air analysis Methods

### 1.3.2.c High Performance Liquid Chromatography (HPLC)

- PAHs (SW-846, Method 8310)
- Low Level Explosives (SW-846, Method 8330)

### 1.3.2.d TOC, TOX, TPH and IR Analysis

Samples are screened and analyzed for Total Organic Carbon , Total Organic Halides, Total Petroleum Hydrocarbons and Infra-Red (IR).

### 1.3.3 Classical & General Chemistry

Chemtech is uniquely qualified to process a large number of samples for a variety of limited chemistry. Chemtech's Wet Laboratory includes instrumentation such as Technicon Auto Analyzer II with multiple modules, UV-Visible Spectrophotometer, Ion Analyzers and multi distillation apparatus for cyanide and phenols analysis.

### 1.4 Waste Characterization and Treatability

Chemtech has extensive experience in the sampling and analysis of waste drums. The following are some of the analyses performed on these types of samples:

- Physical Characteristics
- Chemical Compositions
- Hazardous Characteristics
- Ignitability, Corrosivity Reactivity
- Toxicity Characteristic Leaching Procedure (TCLP)
- Synthetic Leaching Procedure (SPLP)
- ASTM Leaching Procedure

## 2.0 SAMPLING AND ANALYTICAL METHODOLOGIES

Sampling and analysis are performed using Chemtech's Standard Operating Procedures (SOP's) for analysis which are prepared based on US EPA and States Regulatory Agencies approved analytical and sampling procedures.

## 3.0 DATA PROCESSING AND REPORTING

The data processing and report generation department coordinates the data management requests and the assembly of a report in accordance with the specific requirements of the customer. Chemtech's data management capabilities complement its analytical services, by providing a solution for understanding, assessment and evaluation of large volume and complex analytical data.

### 3.1 Report Formats:

Chemtech is capable of providing different levels of reporting to meet specific regulatory and customer requirements; including standard, EPA Superfund, Contract Laboratory Protocol (CLP), NJDEP Reduced Deliverables, NJDEP Regulatory Deliverables-US EPA/CLP Methods and Non- USEPA/CLP Methods, and NYSDEC ASP formats

### 3.2 Electronic Data Deliverables (EDD):

Computer readable diskettes in DOS, ASCII formats are available for CLP and ASP packages. These disks can be used to directly load analytical results into most database softwares. Other customized spreadsheets EDD based on the specific projects requirements are available in other ASCII, Quattro pro, Excel, or Lotus database formats.

Chemtech can also provide ERPIMS and IRDMIS EDD in support of US Department of Defense-Air Force and Army Corps of Engineers Projects.

### 3.3 Data Archival/Data Retrieval

Chemtech maintains all raw data, laboratory notebooks, and other documentation pertinent to each project for three years from the date of report. Data retrieval from archives will be handled in a similar fashion to a request for analysis.

To maintain the client confidentiality, a specific written work request authorized by the original client must be submitted for retrieval of any data.

## 4.0 FACILITIES

Chemtech occupies over 18,000 square feet of space at 205 Campus Plaza 1, Edison, NJ. The single level facility houses the corporate headquarters as well as the laboratory facilities. The facility allows for contiguous space expansion.

Entrance to the laboratory is controlled by a security system. During regular business hours, entrance is into the Office/Reception area or directly into the sample receiving area (doorway or loading dock). After normal business hours, entrance and exit is by authorized personnel only. This entrance requires a security code.

All critical temperature areas, such as freezers, ovens, refrigerators, data processing rooms, phone and modem system rooms are closely monitored to ensure the integrity of the samples, analysis and reporting of the data. All temperatures are properly documented in the appropriate logbooks.

### 4.1 Sample Receipt Area

A separate portion of the laboratory equipped with hoods and adequate ventilation is designated as sample receipt area. The provided work space includes the benches with chemical-resistant tops for receiving and safe handling of the coolers and samples.

### 4.2 Storage Area

Walking cooler and large commercial size refrigerators equipped with locks for security, are used to store the samples. Standards are stored in separate refrigerators away from the samples. The cool storage capacity is designed for simultaneous processing of large size projects.

### 4.3 Sample Preparation Laboratories

The sample preparation laboratories are isolated from the other sections to prevent cross contamination between the digested and undigested samples. These laboratories are equipped with four large hoods and digestion of Low, Medium and High Concentration for organic and inorganic samples according to the EPA CLP and Non-CLP methodologies.

### 4.4 Classical and General Chemistry Laboratory

An area encompassing over 2000 square feet and 300 square feet of bench space enables this laboratory to handle large and multi parameter projects for all matrices.

### 4.5 Instrumentation Laboratories

These laboratories consist of AA Lab, ICAP Lab, GC Lab and GC/MS Lab. Separated from each other and the rest of the operation, these laboratories are designed for a clean and contamination free environment to process a large number of samples for CLP and Non-CLP analyses.

### 4.6 Laboratory Hood Ventilation System

All hoods are monitored for air velocity and the information is logged in the logbooks. Every instrument is operated under a separate ventilation system and the entire laboratory is under negative pressure and is designed for a very safe working environment.

### 4.7 Chemical Hygiene Plan

Chemtech has taken all of the required steps to bring each of the division facilities into compliance with the OSHA Laboratory Standard. A site specific CHP is located at each facility. The CHP was prepared by an independent qualified consulting firm.

On site safety and hazardous substance training has been completed, as required, by the Laboratory Standard.

## 5.0 INSTRUMENTATION

Partial list of instruments includes:

### GAS CHROMATOGRAPH/MASS SPECTROMETRY SYSTEMS

| Instrumentation | Make | Model | Autosampler | Data System |
|---|---|---|---|---|
| GC/MS # 1 | Hewlett-Packard | 5971A | Tekmar | HP Chemstation |
| GC/MS # 2 | Hewlett-Packard | 5971A | Tekmar | HP Chemstation |
| GC/MS # 3 | Hewlett-Packard | 5971A | Tekmar | HP Chemstation |
| GC/MS # 4 | Hewlett-Packard | 5970 | Tekmar | HP Chemstation |
| GC/MS # 5 | Hewlett-Packard | 5970 | Tekmar | HP Chemstation |
| GC/MS # 6 | Hewlett-Packard | 5970 | Arcon | HP Chemstation |
| GC/MS # 7 | Hewlett-Packard | 5970 | Arcon | HP Chemstation |
| GC/MS # 8 | Hewlett-Packard | 5970 | Precept | HP Chemstation |
| GC/MS # 9 | Hewlett-Packard | 5970 | HP7673 | HP Chemstation |
| GC/MS # 10 | Hewlett-Packard | 5970 | HP7673 | HP Chemstation |
| GC/MS # 11 | Hewlett-Packard | 5970 | HP7673 | HP Chemstation |
| GC/MS # 12 | Hewlett-Packard | 5970 | HP7673 | HP Chemstation |
| GC/MS # 13 | Hewlett-Packard | 5970 | HP7673 | HP Chemstation |
| GC/MS # 14 | Hewlett-Packard | 5970 | HP7673 | HP Chemstation |
| GC/MS # 15 * | Hewlett-Packard | 5971 | HP7673 | HP Chemstation |
| GC/MS # 16 * | Hewlett-Packard | 5995 | HP7673 | HP Chemstation |

- Note: Presently not in use. 2/29/00

## GAS CHROMATOGRAPHS

| Instrumentation | Make | Model | Autosampler | Detector | Data System |
|---|---|---|---|---|---|
| GC # 1 | Hewlett-Packard | 5890 | HP7673 | Dual ECD | HP Chem |
| GC # 2 | Hewlett-Packard | 5890 | HP7673 | Dual ECD | HP Chem |
| GC # 3 | Hewlett-Packard | 5890 | HP7673A | Dual ECD | HP Chem |
| GC # 4 | Hewlett-Packard | 5890 | HP7673A | Dual ECD | HP Chem |
| GC # 5 | Hewlett-Packard | 5890 | HP7673A | Dual ECD | HP Chem |
| GC # 6 | Hewlett-Packard | 5890 | HP7673A | Dual ECD | HP Chem |
| GC # 7 | Hewlett-Packard | 5890II | HP7673A | Dual ECD | HP Chem |
| GC # 8 | Hewlett-Packard | 5890 | HP7673A | Dual FID | HP Chem |
| GC # 9 | Hewlett-Packard | 5890II | HP7673A | Dual FID | HP Chem |
| GC # 10 | Perken Elmer | Autosy | PE Autosys. | Hall/PID | HP Chem |
| GC # 11 | Tracor | 540 | Tekmar | Hall/PID | HP Chem |
| GC # 12 | Varian | 3400 | Tekmar | PID | HP Chem |
| GC # 13 | Tremetrics | 9000 | Demension | PID/Hall/FID | HP Chem |

## TOTAL ORGANIC HALOGENS

| Instrumentation | Make | Model | Autosampler | Detector | Data System |
|---|---|---|---|---|---|
| TOX Analyzer | Mitsubishi | TOX-10E | TOX-10E | NA | Chemtech LIMS/Labtrol |

## HPLC SYSTEMS

| Make | Model | Autosampler | Detector | Data System |
|---|---|---|---|---|
| Hewlett Packard | 1100 (UVD) | HP Series | UV/Fluorescent | PC |

## ORGANIC EXTRACTION SYSTEM

| Instrumentation | Make | Model | Autosampler |
|---|---|---|---|
| GPC | ABC | AS2000 | ABC-1000 |
| GPC | OI | AP-500 | AP-500 |
| Turbovap | Zymark | II | NA |

## SPECTROPHOTOMETERS

| Instrumentation | Make | Model | Data System |
|---|---|---|---|
| ICP | Thermo Jarrell Ash | TRACE 61E | Chemtech LIMS/Labtrol |
| ICP | Thermo Jarrell Ash | TRACE 61E | Chemtech LIMS/Labtrol |
| GFAA | Perkin Elmer | 5100 | Chemtech LIMS/Labtrol |
| GFAA | Perkin Elmer | 5100 | Chemtech LIMS/Labtrol |
| AACV | Spectro | Spectro Product | Chemtech LIMS/Labtrol |
| IR | Perkin Elmer | 1310 | Chemtech LIMS/Labtrol |
| UV/VIS | GBC | UV/VIS 918 | Chemtech LIMS/Labtrol |

## 6.0 STATE CERTIFICATIONS:

**A.** New York State, Department of Health (NYSDOH # 11376):

1. Potable Water:
2. Non-Potable Water / Wastewater
3. Environmental Analyses / Air and Emissions
4. Environmental Analyses / Solid And Hazardous Waste

**B.** New York State Department of Health, ASP Certification

ASP / CLP Inorganic and Organic Analysis

**C.** State of New Jersey, Department of Environmental Protection (NJDEP # 12013):

1. Potable Water
2. Non-Potable Water
3. Solid Waste
4. CLP

**D.** State of Oklahoma, Department of Environmental Quality (# 9705)

1. Drinking Water
2. Wastewater
3. Solid Waste

**E.** Commonwealth of Pennsylvania, Department of Environmental Protection (# 68548)

1. Drinking Water

**F.** State of Connecticut Department of Health (# PH 0649)

1. Potable Water
2. Wastewater
3. Sewage
4. Effluent
5. Soil

## 7.0 LABORATORY ORGANIZATION AND MANAGEMENT STRUCTURE

Prior to start of any analytical work on any project, the requirements of the client and Statement of Work are fully discussed among project manager, supervisors, analysts, and the staff assigned to the project. During these meetings laboratory personnel are familiarized with the requirements, and are asked to participate in the planning and implementation of the project.

Chemtech uses a Project Management system to plan, coordinate, integrate and monitor project activities. Efficient and effective project management is critical to the successful execution of any contract and to building lasting customer relationships. To assure that there is a clear and specific understanding of all the technical and administrative aspects of a project, an initial "project kick off meeting" is scheduled with the customer and our project management team.

At Chemtech, Project Management Teams are organized as a unit separate from laboratory operations. In this manner, laboratory project managers work with the customer to address the project requirements and with the laboratory operations staff to schedule and track the project's progress. Our Technical Director is an integral part of the Project Management Team. His responsibilities include the review of all technical issues as they relate to analytical protocols and regulatory requirements.

This team approach to project management provides the customer with a team of qualified laboratory professionals who can answer all questions and solve problems in a responsive manner.

As soon as samples are scheduled to arrive at the laboratory the Laboratory Supervisor, QA/QC Supervisor, and Laboratory Manager are notified. Laboratory procedures and personnel involved shall be reviewed and analysts shall be scheduled to process the upcoming workload.

After the samples arrive in the laboratory, the sample custodian will check the containers, verifying the content. He will follow the SOP for sample receipt, making sure that all the necessary documents have been received, and that all the information is correct, and all the samples are in good condition. In case any problem is encountered, the information will be given to the Laboratory Manager, who will call the project officer in charge, for further guidance. Upon adopting the project officer's recommendations regarding the found discrepancies, or if all the documentation and samples are in a good condition, the sample custodian will sign and date the chain-of-custody form and will start the logging-in process. The samples will be logged into the computer according to the SOP. Log page, and labels will be produced. The labels will be placed on each appropriate bottle, and they will be matched to the information on the bottles for the second time. These labels shall contain the project sample numbers, and Chemtech case and sample numbers. The log pages will be placed in the case folders and a copy will be given to Laboratory Manager.

## 6.0 STATE CERTIFICATIONS:

**A.** New York State, Department of Health (NYSDOH # 11376):

1. Potable Water:
2. Non-Potable Water / Wastewater
3. Environmental Analyses / Air and Emissions
4. Environmental Analyses / Solid And Hazardous Waste

**B.** New York State Department of Health, ASP Certification

ASP / CLP Inorganic and Organic Analysis

**C.** State of New Jersey, Department of Environmental Protection (NJDEP # 12013):

1. Potable Water
2. Non-Potable Water
3. Solid Waste
4. CLP

**D.** State of Oklahoma, Department of Environmental Quality (# 9705)

1. Drinking Water
2. Wastewater
3. Solid Waste

**E.** Commonwealth of Pennsylvania, Department of Environmental Protection (# 68548)

1. Drinking Water

**F.** State of Connecticut Department of Health (# PH 0649)

1. Potable Water
2. Wastewater
3. Sewage
4. Effluent
5. Soil

# APPENDIX E:

Qualifications of Key Personnel
*36 Sylvester Street Site No. 1-30-043U*
*Westbury, New York*
*00-096*

# Richard Parrish, P.G.

6 Florida Avenue
Commack, New York 11725
(516) 543-8822


## Highlights of Qualifications

- Proven success in implementing productivity-enhancement programs
- Excellent personnel and financial management skills and experience
- Strong practical and theoretical foundation in improving engineering and production methods
- Solid experience working with government regulatory agencies

## Professional Experience

**Impact Environmental, Kings Park, New York** 1989-Present
*Senior Geologist*

Supervised geologists, industrial engineers, environmental biologists and computer analysts to develop and implement sampling and analysis operations, quality assurance programs and performance measurement systems. Managed all aspects of corporate finance and budgeting (one million dollar gross per year). Performed staffing analysis, computer systems analysis, computer simulation programming.

Served as supervisor and contract manager on over three hundred petrochemical spill sites throughout New York State, representing both generators and government agencies. Provided contract and sub-contract services to Fortune-500 companies including: Pepsicola Bottling Co. (Pespsico), Coca-Cola Bottling Co., Texaco (Star Enterprises), Burger King Corp., AT&T, Laidlaw, Blockbuster Video, Gencor and Reith-Rieley Construction Co. Provided contract and sub-contract services to regional financial institutions including: European American Bank, The Dime Savings Bank, Key Bank of New York, Fleet Bank, State Bank of Long Island, Long Island Commercial Bank, Shawmut, Roslyn Savings Bank, Home Federal Savings and Sterling Commercial Capital.

Pioneered the solid waste recycling industry. Major projects included the first beneficial use determinations (BUD) issued in the State of New York and the State of Indiana for the utilization of non-hazardous petroleum hydrocarbon contaminated soils as an asphalt aggregate. Said projects included designing, installing, permitting and testing pollution control apparatus (thermal oxidizers). Authored twelve BUD petitions for various other solid waste related projects in New York State. Developed new process for the recycling of petroleum hydrocarbon contaminated soils in the State of New York. Process was approved by the New York State Department of Environmental Conservation in November 1995.

Supervised RI/FS work plans development for Grove Cleaners and select sites within the New Cassel Industrial Park, Inactive Hazardous Waste Disposal Site.

### Achievements

- Certified Professional Geologist, Tennessee Department of Commerce, 1994.
- Senior Project Manager for the Mt. Hope Soil Recycling Facility, Calverton, NY.
- Senior Project Manager for the Prima Soil Recycling Facility, Holtsville, NY.
- Senior Project Manager for the Rason Soil Recycling Facility, Cedarhurst, NY.
- Senior Project Manager for the ART Soil Recycling Facility, Indianapolis, IN.
- Recipient of the Long Island Association Young Entrepreneur of the Year, 1992.
- Recipient of Hofstra University School of Business Achievement Award, 1992.

## Town of Smithtown, Department of Environmental Protection, Smithtown, New York 1985-1988

*Investigator/Aide*

Incident response supervisor for town hazardous material spill unit. Enforced the town health and safety codes. Assisted Suffolk County Health Department in enforcing sanitary codes. Investigated and prepared detailed reports of violations of the New York State Environmental Conservation Laws for submission to State Conservation Officers. Worked on various marine habitat/population surveys. Supervised all town sampling and analysis programs. Trained town employees on OSHA issues including the Written Hazard Communication Laws and "Right to Know" legislation.

Achievements

- Coauthored the Town of Smithtown Underground Storage Tank Management Program.
- Senior Project Manager for the State funded Nissequogue River Pollution Study.
- Senior Project Manager, Town of Smithtown Landfill Worker Safety and Hazardous Material Exposure Reduction Program; received an award for meritorious achievement.
- Lead Agent for a joint investigation between the Town of Smithtown and the Suffolk County District Attorneys Office to prosecute Chemtronics Corporation of Hauppauge.
- Senior Project Manager, Town of Smithtown Beach Water Quality Management Plan: included the sampling of beach waters in Smithtown by town officials and analysis by the county forensic laboratory for fecal coliform

## Education

Masters in Waste Management - SUNY Stony Brook, Candidate (1996)
Bachelors of Arts - Earth and Space Science - SUNY Stony Brook, 1989
Waste Management Certificate Program, Waste Management Institute, CED, 1994

## Training

United State Environmental Protection Agency, Office of Remedial and Emergency Response, forth hour training for Hazardous Materials Response for First Responders, Rochester, New York, 1988.

United State Environmental Protection Agency, Office of Remedial and Emergency Response, twenty-four hour training for Sampling for Hazardous Materials, Princeton, New Jersey, 1989.

New York State Law Enforcement Seminar, Stony Brook, New York, 1989.

## Organizations

Member of the New York State Department of Environmental Conservation's Citizens Advisory Committee for Inactive Hazardous Material Waste Disposal Sites, 1989

National Wellwater Association, 1992

Member of the National Association of Environmental Professionals, 1992

National Asphalt Manufacturers Association, 1993

Long Island Association, 1990

Long Island Venture Group, 1992

Environmental Assessment Association, 1994

Keith M. Franzen
27 Winston Road. Centereach, New York. 11720 • (516) 732-2842

EDUCATION:

Bachelors of Engineering Degree, Mechanical Engineering, December 1993
State University of New York at Stony Brook

Bachelors of Science Degree, Construction Management, December 1991
Utica College of Syracuse University
Dean's Honor List - Spring 1991

Professional Engineer Candidate - Part A Satisfied

EMPLOYMENT:

**Impact Environmental**, Kings Park, New York
*Engineering Geologist* [May 1993 - Present]
Employed to perform geological engineering and design engineering tasks for Phase I and II Environmental Site Assessments and Corrective Action Plans. Responsible for scheduling projects, the preparation of reports and supervision of field personnel. Managed the design and construction of various hazardous substance containment structures.

*Employment Highlights*

- Project Manager for the Suffolk County Health Department Remedial Investigation Project conducted at the New York Institute of Technology Central Islip Campus. Involved defining the periphery of contamination originating from eight abandoned waste water lagoons.

- Project Manager for the New York State Department of Transportation Farragut Service Station Corrective Action Plan. Integral in the design and execution of an Investigation Report to determine the nature and extent of site contamination. Participated in the installation and operation of a groundwater pump and treat system to mitigate a dissolved product plume. Project value $200,000.

- Project Manager for over fifty active New York State Department of Environmental Conservation spill sites. Projects have included all phases of Corrective Action Plan stipulations between clients and the State of New York. Average project value $25,000.

**Franzen Construction**, Centereach, New York
*Owner* [August 1990 - May 1994]
Self-employed construction contractor. Performed design work, construction and evaluations of structural integrity of wood frame structures. Contracted for residential home improvements requiring carpentry, mason, plumbing and electrical skills.

TRAINING:

*Geoprobe* Operating Seminar, Kejr Engineering, Salina Kansas - Trained in the operation of the *Geoprobe* Model 8L Hydraulic Probing System. Interface with both standard and macro-bore assemblies. Member of the *Geoprobe* 100 Plus Club.

Knowledgeable in both Macintosh and IBM - compatible operating systems: System Software: MacDraw, MacWrite, Claris CAD, Claris Works. Excel. Surfer, Autocad R12. Harvard Graphics and Quattro Pro.

# Kevin Kleaka
88 Madison Avenue
Westbury, New York


## EDUCATION

Bachelor of Science in Environmental Science, with a minor in Chemistry.
State University of New York at Plattsburgh, December 1995 .

Applied Environmental Science and Agricultural Program at Miner Institute, Chazy, NY, 1994.

Scholastic Excellence: Lake Champlain PCB Analysis, Fall 1995
Certificate of Academic Excellence, Spring 1994.
Dean's List, Spring 1993.

## EMPLOYMENT EXPERIENCE

**Pharmacy Technician IV, Wyeth Ayerst Laboratories, Rouses Point, New York.**
December 1995-June 1997. Assigned to the division of chromatographic separations. Perform laboratory procedures and analyses, in accordance with USFDA approved analytical test methods, for Quality Assurance and Technical Services by Liquid, Gas and Thin Layer Chromatography. Proficiency in data analysis through acquisition system Access*Chrom, utilization of computerized LIMS database, calibration and maintenance of laboratory equipment.

**Environmental Scientist, Impact Environmental, Kings Park, New York.**
June 1997-Present. Technical operator for Geoprobe sampling system for the acquisition of subsurface soil and groundwater (June 97-August 98). Technical operator for ground penetrating radar (GPR) unit to locate subsurface structures (December 97-Present). Performance of Phase II Environmental Site Assessments for various lending institutions and private clients. Includes supervision of quality assurance and control of sample acquisition, sample design and laboratory analysis plans, map generation, interpretation of laboratory data in comparison to federal, state and local regulations, and report generation (August 98-present). Performance of Phase I Environmental Site Assessments in accordance with ASTM industry standards. Includes database research, on-site inspections, report generations (September 98-Present) .

## SPECIAL SKILLS

IBM Computer Application Programs: WordPerfect, Quattro Pro, Surfer, Stella 2, Access*Chrom.
Macintosh Computer Application Programs: Microsoft Word, Excel, Claris Works, Claris CAD.

## RELEVANT COURSEWORK

Chemistry I and II, Environmental Chemistry, Water Quality Modeling, Chemical processes in the Environment, Aquatic Chemistry, Geology, Geochemistry, Hydrology, Soil Science.

## REFERENCES

Available upon request.

347 Concord Ave.
Lindenhurst, NY 11757
Home (516) 226-4130

# Eric P. Krist

**Objective** To secure a position as an Environmental Technician

**Work experience** 1998 – present Control Mechanical Inc. Copiague, NY

**Plumbing Apprentice**

- Assist plumbing mechanics with all aspects of plumbing

1994 – 1998 Power House Sheet Metal Hicksville, NY

**Driver / Warehouse /Fork Lift Operator**

- Ensured completion of daily deliveries, Handled the fabrication of orders, received merchandise

**Volunteer experience** Member of the Copiague Volunteer Fire Department since July, 1990

- (Related certificate) **Hazardous Materials First Responder** (16 Hours of instruction)

**References** Furnished upon request

**Education** High School Equivalency Diploma - University of the State of New York

**GED**

*Charles K. Buccino*
*5 Ireland Place*
*Copiague, NY 11726*
*(516) 264-7117*

**OBJECTIVE:** To obtain a position with a company where I can potentially grow, and utilize my mechanical skills, education and experience.

**EXPERIENCE:**

5/96-2/98: Sam Axinn Lumber, Amityville, NY - Home Improvement Center
**Driver/ Yard Worker**
Responsibilities included:
- Matching job orders to the correct material, and delivery of same
- Safe use of heavy equipment within the yard
- Repair and maintenance of machinery used everyday
- Customer service

3/95-12/95: Century 21, Bayshore, NY – Real Estate
**Maintenance/ Repair, Construction**
Responsibilities included:
- Rebuild and repair of houses purchased by the company
- Maintenance of occupied homes rented through the company

5/90-9/94 Ancon Gear, Farmingdale, NY – Machine shop Gear manufacturer
**Machine operator**
Responsibilities included:
- Set up and operation of computer programmed milling machines
- Set up and operation of lathes and screw machines
- Operation of gear cutting machinery
- Established and maintained a preventative maintenance schedule
- Repair of machinery as needed
- Established and maintained a complete inventory of equipment and tools in stock and operation.
- Operated fork lift

8/85-4/90 South Bay Construction, Amityville, NY – Construction company
**Carpenter's assistant/ truck driver**
Responsibilities included:
- Assisted with the framing of new houses
- Application of roof layers and shingles
- Pick up and deliver materials to various sites
- Maintained and repaired tools and machinery as needed

10/76- 6/85 Controlled Alloy, Commack, NY – Sheet metal manufacturer
**Sheet metal mechanic**
Responsibilities included:

- Fabricated parts from sheet steel from blue prints
- Set up and operated punch and power presses, brakes, power shears
- Setup a maintenance schedule for all machinery
- Repaired and maintained equipment and machinery
- Use of heavy operating equipment
- Delivered material when needed

EDUCATION:

Graduated 6/76 Copiague High School, Copiague, NY
General High school diploma

1975-1976 Lewis A. Wilson Technical School, Dix Hills, NY
- Diploma in Carpentry

Additional training classes included:
- Blue print reading
- Auto Cad R12

MEMBERSHIPS:

10/76- Present: Copiague Volunteer Fire Department, Copiague, NY
**New York State Certified Class A Fireman**
Member of the Eagle Engine Company
Responsibilities include:
- Advanced firefighting
- Training members in all aspects of firefighting, pump operations, and emergency vehicle operations

OTHER:

New York State valid Class B drivers license

REFERENCES:

Available upon request

# Focussed Remedial Investigation

Final Work Plan

*July 10, 2000*

# 00-096

*Proposed for:*

**Site Code # 1-30-043U**
**36 Sylvester Street**
**Westbury, New York**

*Client:*

**Grand Machinery Exchange, Inc.**
**215 Centre Street**
**New York, New York**

*User:*

**New York State Department of Environmental Conservation**
**Bureau of Eastern Remedial Action**
**Division of Environmental Remediation**
**50 Wolf Road**
**Albany, New York**


IMPACT ENVIRONMENTAL

a division of impact environmental consulting, inc.

1 VILLAGE PLAZA, KINGS PARK, NEW YORK 11754 ❖ 631.269.8800 TELEPHONE ❖ 631.269.1599 FACSIMILE ❖ IMPACTENVIRONMENTAL.COM

IMPACT ENVIRONMENTAL


GMEI-00228

# Focussed Remedial Investigation

Final Work Plan

*July 10, 2000*

# 00-096

*Proposed for:*

**Site Code # 1-30-043U**
**36 Sylvester Street**
**Westbury, New York**

*Client:*

**Grand Machinery Exchange, Inc.**
**215 Centre Street**
**New York, New York**

*User:*

**New York State Department of Environmental Conservation**
**Bureau of Eastern Remedial Action**
**Division of Environmental Remediation**
**50 Wolf Road**
**Albany, New York**

# TABLE OF CONTENTS

## Plates:



## Diagrams:



## Tables:



## Appendices:



DISTRIBUTION LIST

| *Report Holder* | *Number of Reports Issued* |
|---|---|
| NYSDEC, Division of Environmental Remediation | 2 |
| Grand Machinery Exchange, Inc. | 1 |
| Impact Environmental Consulting, Inc. Corporate Records | 1 |

## 1. Introduction

This work plan details the various tasks that will be performed in the investigation of the property located at 36 Sylvester Street, Westbury, New York, herein identified as the "Site". In 1997, a Multi-site Preliminary Site Assessment (PSA) Task 4 Report prepared by Lawler, Matusky and Skelly Engineers (LMS) for the New York State Department of Environmental Conservation (NYSDEC) suggested that individual properties within the New Cassel Industrial Area (NCIA) contained the pollution sources responsible for the detected regional groundwater contamination. In recognition of this, the NYSDEC eliminated a regional listing approach that was used for the NCIA and adopted a strategy of locating individual properties within the NCIA for listing as Inactive Hazardous Waste Disposal Sites (IHWDSs). Based upon an interpretation of the data obtained by LMS, the NYSDEC determined that the Site was one of such properties.

Grand Machinery Exchange, Inc. is the current owner of the Site. The previous PSA indicated that groundwater beneath and down-gradient of the Site is contaminated with 1,1,1-Trichloroethane (TCA). As such, the Site has been designated by the NYSDEC as an IHWDS, as defined in ECL 27-1301.2. The site has been listed in the State Registry as Site Number 01-30-043U.

This Focused Remedial Investigation (FRI) will delineate the nature and extent of on-site contamination and the results will be submitted in a Focused Remedial Investigation Report in accordance with the provisions of the Draft Order on Consent between the NYSDEC and Grand Machinery Exchange, Inc. If necessary, a Focused Feasibility Study evaluating remedial action alternatives will later be submitted to the Department pursuant to the terms of the Order on Consent.

The Site is bordered by Sylvester Street to the west, New York Avenue to the east, and is situated between Main Street to the north and Old Country Road to the south. The Site was initially developed circa 1952 with a one-story, masonry building used for light industrial applications. The building was subsequently improved with an addition and various interior alterations. Presently, the Site is operated by Gel-Tec, a division of Tishcon Corp. The interior of the building is primarily utilized as warehouse space for Gel-Tec. The footprint of the building covers the majority of the property, with the exception of alleys on the north and south portions of the Site. The building is serviced with a natural gas fired heating system and was connected to the municipal sewer system circa 1987.

## 2. Proposed Site Background Study

### 2.1 Site Location and Topography

The Site is located at 36 Sylvester Street, Westbury, New York. This location is bordered by Sylvester Street to the west, New York Avenue to the east, and is situated between Main Street to the north and Old Country Road to the south. Refer to **Plate 1:** Site Location Map, *Westbury, New York*. The areal extent of the Site is approximately 20,000 square feet. The Site contains one single-story, masonry building with an approximate combined footprint of 12,125 square feet. The surface area of the Site consists of asphalt parking areas, and concrete walkways. The Site exhibits low topographic relief (one to three percent slopes). Refer to **Plate 2:** Site Map, Westbury, New York.

### 2.2 Site Background Study

A 50-year site background study will be conducted that will include information on past land uses on and immediately off-site. Historic information will be compiled from various private and public sources including the Cole reverse telephone directories, Sanborn fire insurance maps, E. Belcher Hyde maps, LILCO (LIPA) records, Town of North Hempstead Building Department records (these records typically include the location of sanitary disposal structures) and aerial photographs. Information regarding past and current chemical and/or petroleum storage, handling, disposal practices, spills, and any previous environmental investigations will also be obtained from the Nassau County Department of Health, the NYSDEC (Region 1 Office – Stony Brook), and other related agencies.

### 2.3 Site Geology

A thorough discussion of site geology, including descriptions of surficial geology, unconsolidated deposits and the underlying bedrock will be presented. This data will be compiled from boring logs installed on-site and from reliable data sources, such as the U.S. Geological Survey (USGS).

### 2.4 Site Geohydrology

The geohydrology of the Site will be examined using available groundwater potentiometric surface maps provided by the USGS and data obtained from the results of the subsurface investigative activities proposed in this document. The investigation data will be used to compile a site-specific potentiometric map of the water table, determine groundwater transport rates and understand the dynamics of on-site contaminant migration. Additionally, the

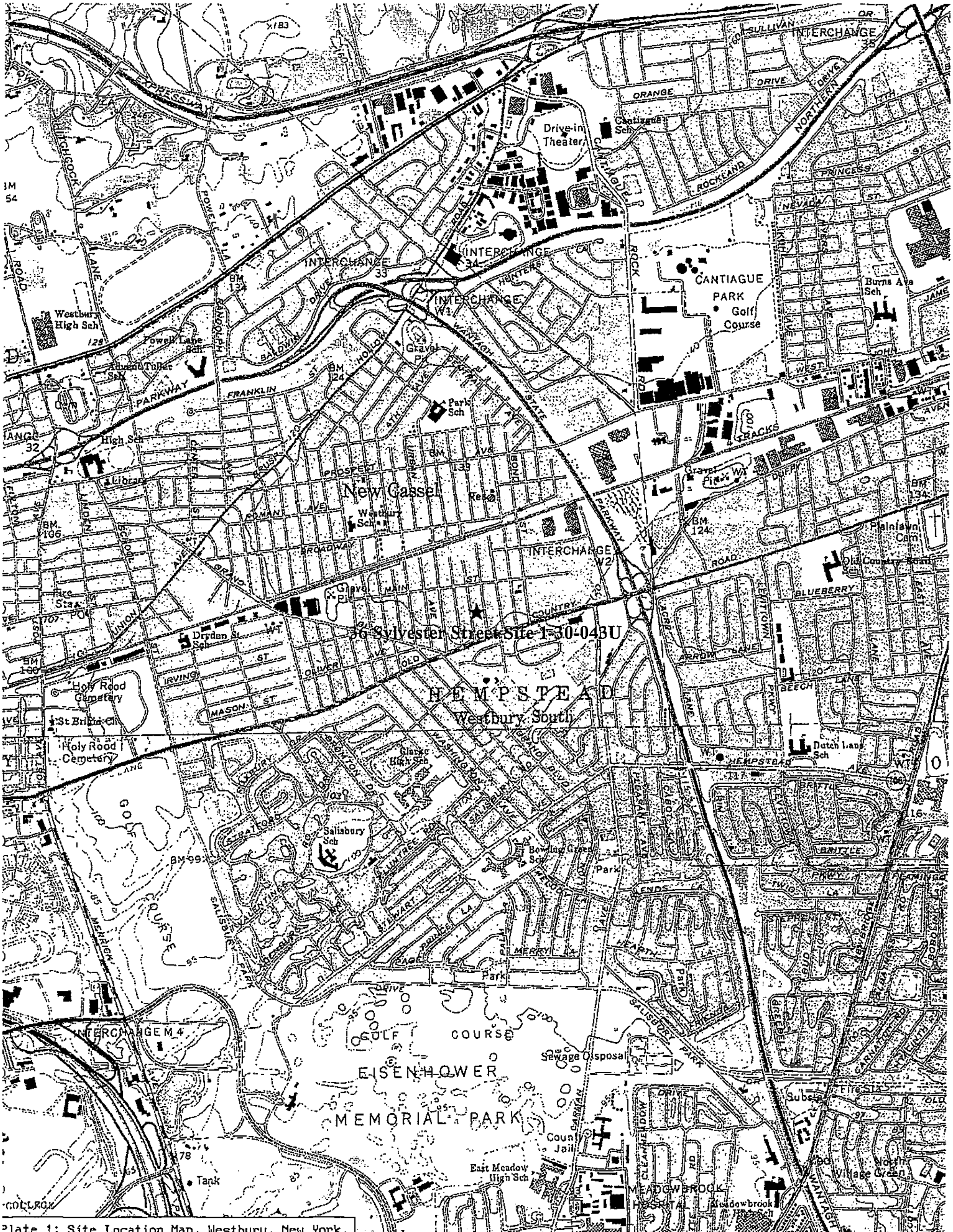
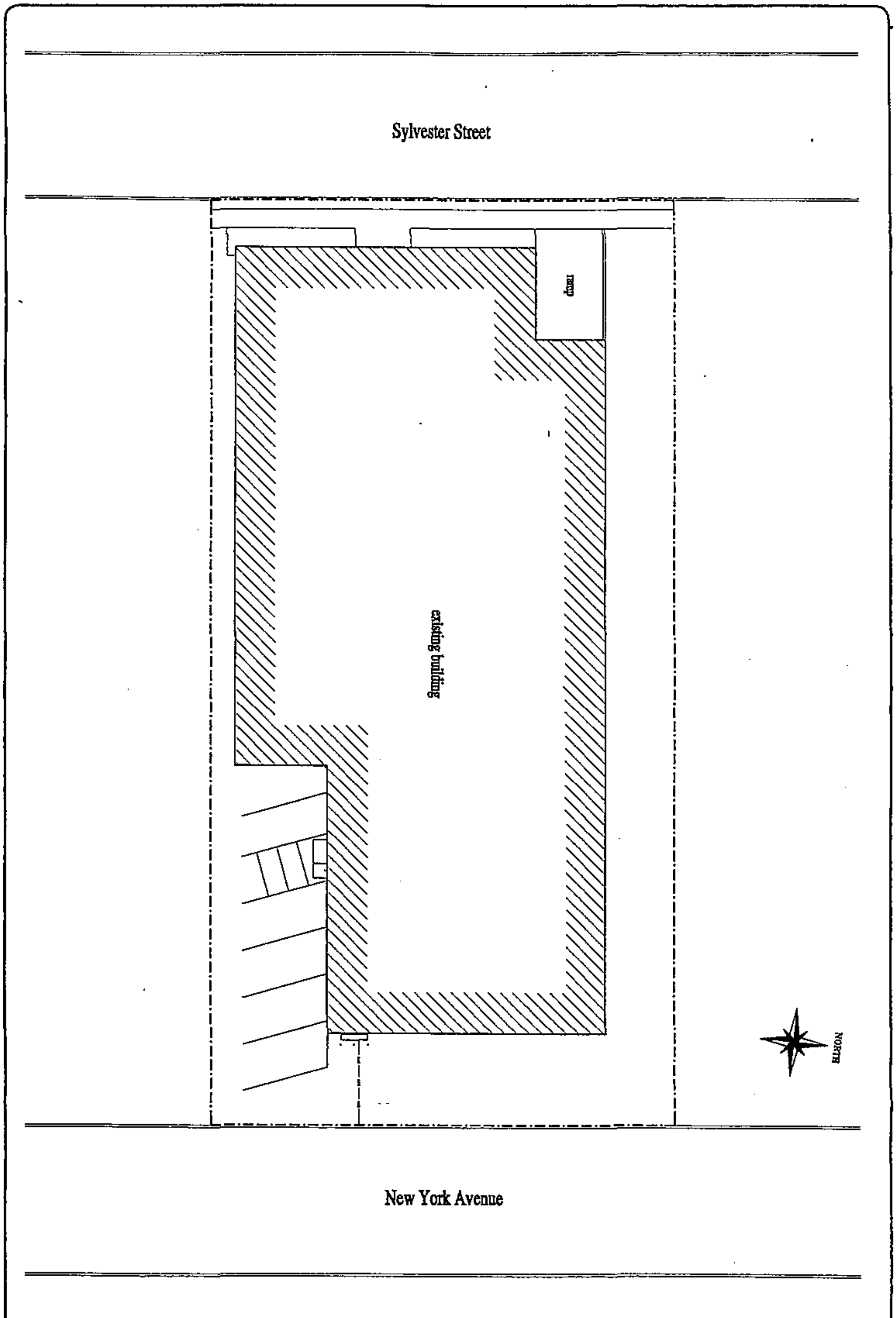



Plate 1: Site Location Map, Westbury, New York,




IMPACT ENVIRONMENTAL
a division of Impact Environmental Consulting Inc.
1 Village Plaza
Kings Park, New York 11754

# 00-096

Plate 2: Site Map

*Westbury, New York*

Legend:
- groundwater probe node
- soil probe node
- monitoring well

scale: 1" = 20'

GMEI-00237

physical characteristics of the underlying aquifers will be identified. Such characteristics will include the aquifer's transmissivity, porosity and hydraulic conductivity.

## 3. Site Inspection Activities

### 3.1 Site Visit

A Site inspection will be performed under the auspices of the NYSDEC. The inspection will identify the location of on-site buildings, parking lots, drains, underground injection wells, and other potential sources of point and non-point contamination. Ten-day notice will be provided to the NYSDEC prior to the site visit.

### 3.2 Remote Sensing Survey

A remote sensing survey plan will be designed to identify any routes or mechanisms for the migration of contaminants released at the Site. Potential routes and mechanisms include underground storage tanks (USTs), underground injection wells (UIWs), sub-grade storage vaults and buried portable storage containers (drums). The survey will be performed with a ground penetrating radar (GPR) unit to locate the presence of any of these potential pollution sources that may exist on the Site.

The data collected during the survey will be reviewed by the operator and compared against past experience, technical judgment, and prior Site knowledge to classify anomalies. When a relevant structure is identified, the location will be marked using a small flag or marking paint and plotted onto a Site Plan.

The remote sensing survey may also incorporate the use of a remote camera transmitter snake and/or dye tablets to track any piping associated with any existing or former interior drainage features. If necessary, the survey may include a destructive investigation to identify the outfall location or migration paths of any potential pollution sources.

### 3.3 Locating and Mapping Subsurface Structures

Subsurface structures will be surveyed on the surface of the Site using various color marking paints and mapped on Site maps.

### 3.4 Evaluation of Emergency Procedures

The routes of emergency egress will be evaluated and marked with flagging, traffic cones or marking paint, if necessary. This will be done to ensure that equipment or on-site vehicles cannot temporarily block routes of emergency egress from all boring locations. Additionally, the site safety plan will be reviewed on-site by all workers to insure compliance.

## 3.5 Site Survey Report

The information compiled from the site inspection activities (site visit, remote sensing survey, locating and mapping subsurface structures) will be presented in a Site Survey Report. This report will provide site-specific details regarding potential point and non-point pollution sources. This report will establish the basis for proposing more specific and/or additional investigative parameters. Submission of the report will be provided to the NYSDEC.

# 4. Investigation of Soil and Groundwater Quality

## 4.1 Proposed Investigation of Point and Non-Point Sources

The information obtained from the Site inspection activities will be used to determine the locations that hazardous substances, if any, were released to specific (point sources) or non-specific (non-point sources) surface or subsurface areas of the Site.

### *4.1.1 Point Pollution Sources*

Typical point sources of pollution include underground injection wells, underground storage tanks, and recognizable surface discharges. Soil probes will be installed within the confines of any underground injection wells (storm water drywells, leaching lagoons, wastewater disposal wells, retention pits or cesspools) identified on the Site. Where an UIW is identified, three subsurface samples will be secured at three depth intervals for analysis. Continuos soil sampling will be performed from grade to a depth of sixteen (16) feet below existing grade (BEG). One sediment sample representative of the invert of the structure will be secured for analysis. Sample selection for this sample will be based on field screening and measurements obtained with a photo ionization detector (assuming the UIW has been backfilled). The second soil sample will be secured at a depth interval of thirty-eight (38) to forty (40) feet BEG. The third soil sample will be secured at a two (2) foot depth interval at a minimum of ten (10) feet above the groundwater table (i.e. if the groundwater is at 55' BEG, the sample will be acquired from 43'-45'ft.). In addition, one (1) Geoprobe temporary groundwater monitoring well will be installed either from within or adjacent to each UIW identified on the site.

The laboratory analysis of the sediment sample obtained from the invert of an UIW will consist of USEPA Test Methods 8260 for total volatile organic analytes, 8270BN for total base neutral semi-volatile organic analytes and 6010 for total metals. The laboratory analysis of the soil samples obtained from the second and third depth interval (as described above) will consist of USEPA Test Method 8260 for total volatile organic analytes. Additionally, these samples will be analyzed for metals if the sediment sample (invert sample) detects concentrations of metals above ambient conditions. Refer to **Table 1:** Target Analyte List (Soil). The laboratory analysis of the groundwater samples (temporary wells) will be performed using USEPA test method 624 (modified to include target analytes and tentatively identified compounds (TICs) for volatile organic analytes). Refer to **Table 2:** Target Analyte List (Groundwater).

A minimum of three (3) soil probes will be installed surrounding any underground storage tanks identified on the Site. Samples will be secured and field screened from the probes on a 15-foot vertical interval to 45-ft BEG.

**Table 1: Sampling Analysis in Soil**
36 Sylvester Street Site No. 1-30-043U

### USEPA Test Method 8260
Target Volatile Organic Analytes

| | | | |
|---|---|---|---|
| Dichlorodifluromethane | Tetrachloroethene | Bromodichloromethane | 4-Isopropyltoluene |
| 1,1,1-Trichloroethane | 1,1,1,2-Tetrachloroethane | Bromomethane | Bromobenzene |
| 1,1,2-Trichloroethane | 1,1,2,2-Tetrachloroethane | Carbon Disulfide | Bromoform |
| 1,1-Dichloroethane | 1,2,3-Trichlorobenzene | Carbon Tetrachloride | Chlorobenzene |
| 1,1-Dichloroethene | 1,2,3-Trichloropropane | Chloroethane | Dibromochloromethane |
| 1,1-Dichloropropene | 1,2,4-Trichlorobenzene | Chloroform | Ethylbenzene |
| 1,2-Dichloroethane | 1,2,4-Trimethylbenzene | Chloromethane | Hexachlorobutadiene |
| 1,2-Dichloropropane | 1,2-Dibromo-3-chloropropane | cis-1,2-Dichloroethene | Isopropylbenzene |
| 2,2-Dichloropropane | 1,2-Dibromoethane | cis-1,3-Dichloropropene | m+p-Xylenes |
| 2-Butanone | 1,2-Dichlorobenzene | Dibromoethane | Napthanlene |
| 2-Chloroethyl Vinyl Ether | 1,3,5-Trimethylbenzene | Methylene Chloride | n-Butylbenzene |
| 4-Methyl-2-Pentanone | 1,3-Dichlorobenzene | Toluene | n-Propylbenzene |
| Acetone | 1,3-Dichloropropane | Trans-1,2-Dichloroethene | o-Xylene |
| Acrolein | 1,4-Dichlorobenzene | trans-1,3-Dichloropropene | sec-Butylbenzene |
| Acrylonitrile | 2-Chlorotoluene | Trichloroethene | Styrene |
| Benzene | 2-Hexanone | Trichlorofluoromethane | tert-Butylbenzene |
| Bromochloromethane | 4-Chlorotoluene | Vinyl Acetate | Vinyl Chloride |

### USEPA Test Method 8270BN
Target Semi-Volatile Organic Analytes

| | | | |
|---|---|---|---|
| 1,2,4-Trichlorobenzene | Acenapthene | Bis(2-Ethylhexyl)Phthalate | Hexachloroethane |
| 1,2-Dichlorobenzene | Naphthalene | Butylbenzylphthalate | Hexaclorocyclopentadiene |
| 1,3-Dichlorobenzene | Fluorene | o-Cresol | Isophorone |
| 1,4-Dichlorobenzene | 1,2-Diphenylhydrazine | Phenanthrene | Nitrobenzene |
| 2,4-Dinitrotoluene | 3,3-Dichlorobenzidine | Pyrene | N-Nitroso-di-n-Propylamine |
| 2,6-Dinitrotoluene | 4-Bromophenyl-phenylether | Carbazole | Chrysene |
| 2-Chloronapthalene | 4-Nitroaniline | Bis(2-Chloroethoxy)methane | Dibenzo-a,h-Anthracene |
| 2-Methylnaphthalene | Anthracene | Bis(2-Chloroethyl)ether | Di-n-Butylphthalate |
| 2-Nitroaniline | Benzo-a-Anthracene | Bis(2-Chloroisopropyl)ether | Di-n-Octylphthalate |
| 3-Nitroaniline | Benzo-a-Pyrene | Dibenzofuran | Fluoranthene |
| 4-Chloroaniline | Benzo-b-Fluoroanthene | Diethylphtalate | Hexaclorobenzene |
| 4-Chlorophenyl ether | Benzo-g,h,i-Perylene | Dimethylphtalate | Indeno(1,2,3-c,d)Pyrene |
| Acenaphthene | Benzo-k-Fluoroanthene | Hexachlorobutadiene | m.p-Cresol |
| | | | N-Nitrosodiphenylamine |

### USEPA Test Method 6010
Target RCRA Inorganic Analytes

| | | | |
|---|---|---|---|
| Alumimium | Calcium | Magnesium | Silver |
| Antimony | Chromium | Manganese | Sodium |
| Arsenic | Cobalt | Mercury | Thallium |
| Barium | Copper | Nickel | Vanadium |
| Beryllium | Iron | Potassium | Zinc |
| Cadmium | Lead | Selenium | |

**Table 2: Sampling Analysis in Groundwater**
36 Sylvester Street Site No. 1-30-043U

**USEPA Test Method 624**
Target Volatile Organic Analytes
(This method will be modified to include Tentatively Identified Compounds)

| | |
|---|---|
| 1,1,1-Trichloroethane | Carbon Tetrachloride |
| 1,1,2,2-Tetrachloroethane | Chlorobenzene |
| 1,1,2-Trichloroethane | Chloroethane |
| 1,1-Dichloroethane | Chloroform |
| 1,1-Dichloroethene | Chloromethane |
| 1,2-Dichlorobenzene | cis-1,3-Dichloropropene |
| 1,2-Dichloroethane | Ethylbenzene |
| cis-1,2-Dichloroethene | m+p Xylenes |
| 1,2-Dichloropropane | Methylene Chloride |
| 1,3-Dichlorobenzene | o-Xylene |
| 1,4-Dichlorobenzene | Tetrachloroethene |
| 2-Chloroethyl Vinyl Ether | Toluene |
| Benzene | Trans-1,2-Dichloroethene |
| Bromochloromethane | trans-1,3-Dichloropropene |
| Bromodichloromethane | Trichloroethene |
| Bromoform | Trichlorofluoromethane |
| Bromomethane | Vinyl Chloride |

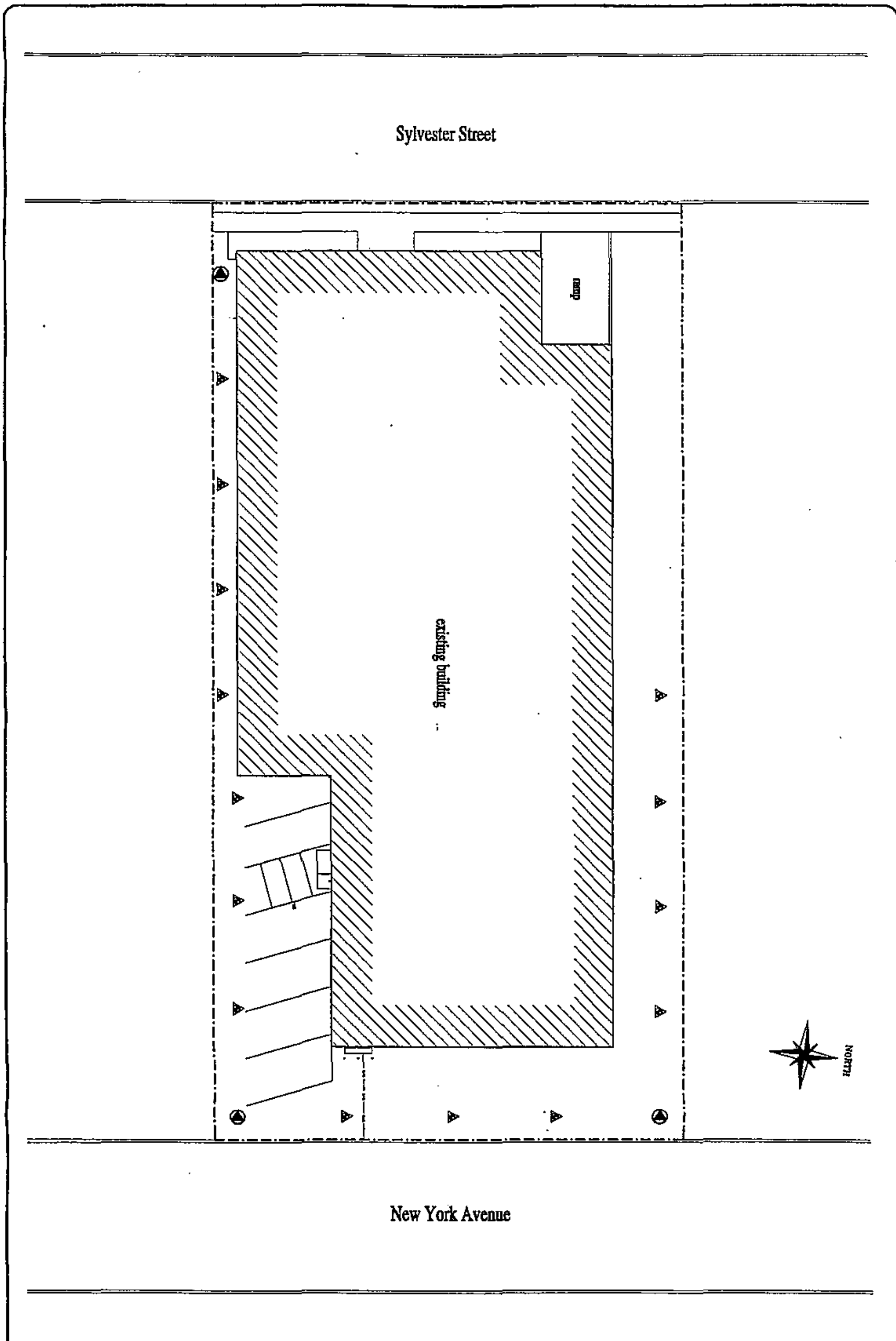
Analysis of each sample interval will be performed utilizing USEPA Test Method 8260 for target volatile organic analytes.

A minimum of one (1) soil probe will be installed in any surface discharge area identified on the Site. Samples will be secured and field screened from the probes on a 15-foot vertical interval to 45-ft BEG. Analysis of each sample interval will be performed utilizing USEPA Test Method 8260 for target volatile organic analytes, USEPA Test Method 8270 for target base-neutral semi-volatile organic analytes and USEPA Test Method 6010 for priority pollutant inorganic analytes.

### *4.1.2 Non-Point Pollution Sources*

Non-point pollution sources are those that impact a large area in a heterogeneous manner due to source variation. Such sources are difficult to detect from site inspection activities, therefore, the investigative approach to determine their impact on Site quality is intuitive. To detect such sources, groundwater quality entering and exiting the Site is gauges using a non-biased sampling plan (grid pattern). As part of the sampling plan, seventeen (17) groundwater sample locations will be sited on the Site. Three (3) of the seventeen groundwater samples will be acquired from permanent groundwater monitoring wells. The additional fourteen (14) groundwater sample locations will be acquired from temporary groundwater monitoring wells. These well points will be installed to compare up-gradient and down-gradient groundwater quality in conjunction with previously obtained data from the Site.

One (1) water sample obtained at the water table surface will be secured from each permanent groundwater monitoring well. Three (3) water samples obtained at three separate depths will be secured from each temporary groundwater monitoring well. Geoprobe groundwater sampling (temporary wells) depths will be based on actual groundwater depth measurements at the site. The presumed sampling depths will be in intervals representative of 55'-65', 66'-75' and 76'-85'below existing grade. If a significant difference in the presumed groundwater depth and actual groundwater depth is identified, any changes to groundwater sampling depth will be approved before installation. The multiple depth sampling is proposed to emulate historical groundwater quality data. Analysis of these samples (permanent and temporary wells) will be performed using USEPA test method 624 (modified to include target analytes and tentatively identified compounds (TICs) for volatile organic analytes). Additionally, the laboratory will perform the calibration on the samples every 12 hours. Refer to **Table 2:** Target Analyte List (Groundwater). All proposed locations can be referenced with **Plate #3:** Sample Acquisition Plan, Westbury, New York.





IMPACT ENVIRONMENTAL

*a division of Impact Environmental Consulting Inc.*

1 Village Plaza
Kings Park, New York 11754


# 00-096

Plate 3: Sample Acquisition Plan

*Westbury, New York*

Legend:

- groundwater probe node
- soil probe node
- monitoring well

scale: 1" = 20'

PLEASE TYPE OR PRESS FIRMLY WHEN WRITING ON FORM
INSTRUCTIONS (RP-5217-INS): www.orps.state.ny.us

New York State Department of
**Taxation and Finance**
Office of Real Property Tax Services
**RP- 5217**
Real Property Transfer Report (8/10)

FOR COUNTY USE ONLY
C1. SWIS Code
C2. Date Deed Recorded ___ / ___ / ___ (Month, Day, Year)
C3. Book ___ C4. Page ___

**PROPERTY INFORMATION**

1. Property Location: 848 (Street Number) Willis Avenue (Street Name)
Albertson (City or Town) | (Village) | 11507 (Zip Code)

2. Buyer Name: Met + John, LLC (Last Name / Company) | (First Name)
(Last Name / Company) | (First Name)

3. Tax Billing Address — Indicate where future Tax Bills are to be sent if other than buyer address (at bottom of form): (Last Name / Company) | (First Name)
(Street Number and Street Name) | (City or Town) | (State) | (Zip Code)

4. Indicate the number of Assessment Roll parcels transferred on the deed: 1 # of Parcels OR ☐ Part of a Parcel

(Only if Part of a Parcel) Check as they apply:
4A. Planning Board with Subdivision Authority Exists ☐
4B. Subdivision Approval was Required for Transfer ☐
4C. Parcel Approved for Subdivision with Map Provided ☐

5. Deed Property Size: ___ (Front Feet) X ___ (Depth) OR ___ . ___ (Acres)

6. Seller Name: Leemilt's Petroleum, Inc. (Last Name/Company) | (First Name)
(Last Name/Company) | (First Name)

7. Check the box below which most accurately describes the use of the property at the time of sale:

- A ☐ One Family Residential
- B ☐ 2 or 3 Family Residential
- C ☐ Residential Vacant Land
- D ☐ Non-Residential Vacant Land
- E ☐ Agricultural
- F ☑ Commercial
- G ☐ Apartment
- H ☐ Entertainment / Amusement
- I ☐ Community Service
- J ☐ Industrial
- K ☐ Public Service
- L ☐ Forest

Check the boxes below as they apply:
8. Ownership Type is Condominium ☐
9. New Construction on Vacant Land ☐
10A. Property Located within an Agricultural District ☐
10B. Buyer received a disclosure notice indicating that the property is in an Agricultural District ☐

**SALE INFORMATION**

11. Sale Contract Date: 08 / 14 / 13 (Month, Day, Year)

12. Date of Sale / Transfer: 10 / 15 / 13 (Month, Day, Year)

13. Full Sale Price: 710,000.00
(Full Sale Price is the total amount paid for the property including personal property. This payment may be in the form of cash, other property or goods, or the assumption of mortgages or other obligations.) *Please round to the nearest whole dollar amount.*

14. Indicate the value of personal property included in the sale: 0.00

15. Check one or more of these conditions as applicable to transfer:
- A ☐ Sale Between Relatives or Former Relatives
- B ☐ Sale Between Related Companies or Partners in Business
- C ☐ One of the Buyers is also a Seller
- D ☐ Buyer or Seller is Government Agency or Lending Institution
- E ☐ Deed Type not Warranty or Bargain and Sale (Specify Below)
- F ☐ Sale of Fractional or Less than Fee Interest (Specify Below)
- G ☐ Significant Change in Property Between Taxable Status and Sale Dates
- H ☐ Sale of Business is Included in Sale Price
- I ☐ Other Unusual Factors Affecting Sale Price (Specify Below)
- J ☑ None

**ASSESSMENT INFORMATION** - Data should reflect the latest Final Assessment Roll and Tax Bill

16. Year of Assessment Roll from which information taken: 13
17. Total Assessed Value (of all parcels in transfer): 4,703

18. Property Class: 432-24
19. School District Name: Mineola

20. Tax Map Identifier(s) / Roll Identifier(s) (If more than four, attach sheet with additional identifier(s))
Section: 9 Block: 111 Lots: 35+36

**CERTIFICATION**

I certify that all of the items of information entered on this form are true and correct (to the best of my knowledge and belief) and I understand that the making of any willful false statement of material fact herein will subject me to the provisions of the penal law relative to the making and filing of false instruments.

**SELLER SIGNATURE**
Leemilt's Petroleum, Inc.
By:
(Seller Signature) Name: Joshua Dicker (Date) Title: Senior VP

**BUYER SIGNATURE**
Met + John, LLC
By:
(Buyer Signature) Name: Title: (Date)

**BUYER'S ATTORNEY**
O'Brien (Last Name) | Kevin (First Name)
516 (Area Code) | 294-5100 (Telephone Number)

**BUYER CONTACT INFORMATION**
(Enter information for the buyer. Note: If buyer is LLC, society, association, corporation, joint stock company, estate or entity that is not an individual agent or fiduciary, then a name and contact information of an individual/responsible party who can answer questions regarding the transfer must be entered. Type or print clearly.)
(Last Name) | (First Name)
(Area Code) | (Telephone Number)
(Street Number) | (Street Name)
(City or Town) | (State) | (Zip Code)

NEW YORK STATE COPY

## 5. Investigative Procedures

### 5.1 GPR Survey

A qualified Impact Environmental Consulting, Inc. technician will specify a coordinate system on the plainmetric surface of the site to map any subsurface dielectric anomalies detected on the premises. The operator uses knowledge of the subsurface soil composition to calibrate the SIR-2 system to site specific conditions. Factor settings such as range, gain, number of gain points, and scans per unit will be modified to yield the most accurate data to describe the subsurface conditions.

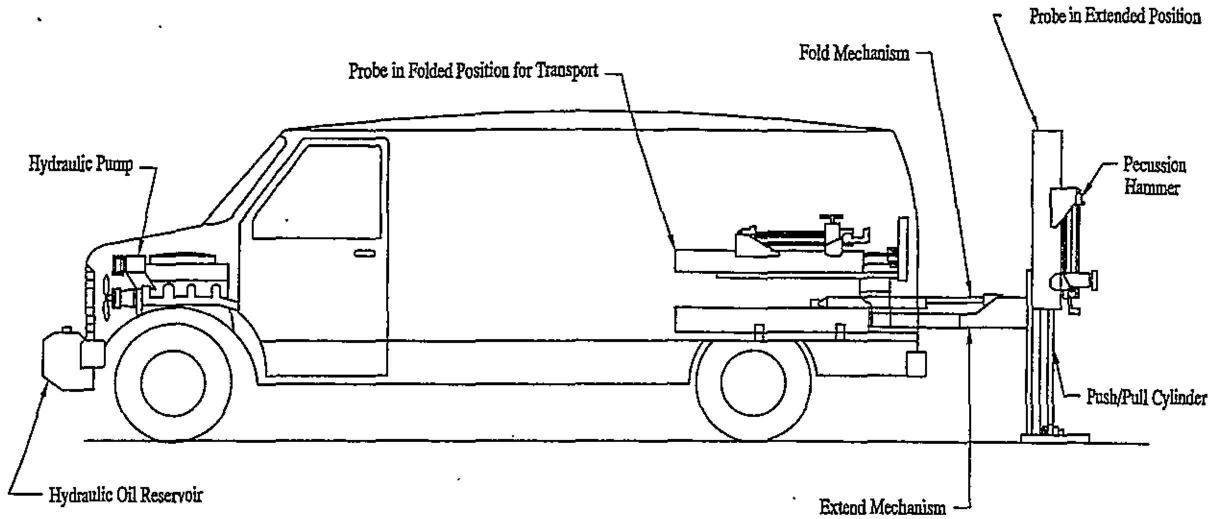
Upon finding a dielectric anomaly, a more spatially specific coordinate system will be designed over the area to determine its size, shape, and orientation.

### 5.2 Subsurface Probe Installation

Subsurface probes will be installed using a *Geoprobe* hydraulically powered probing tool (see **Diagram 1**: Geoprobe Operating System). Mechanized, vehicle mounted probe systems apply both static force and hydraulically powered percussion hammers for tool placement (static down forces up to 3,000 pounds combined with percussion hammers of eight horsepower continuous output). Recovery of large sample volumes will be facilitated with a probe-driven sampler. The probe-driven sampler consists of a hollow probe, which opens via a remote control mechanism at the selected sampling depth in the soil profile to allow soil to enter as it was advanced. Discrete media samples will be secured at the desired depths and contained within a non-reactive transparent plastic sleeve that lined the hollow probe. The plastic sleeves will be removed for subsequent inspection and sample aliquot acquisition.

### 5.3 Sample Characterization

A visual inspection of all samples recovered during the installation of each of the soil probes will be conducted to identify any gross signs of chemical contamination and to classify the sample media. Color classifications will be made in accordance with the Munsell Classification System. Gradation classifications will be made in accordance with the Unified Soil Classification System. In addition, samples will be screened for contamination using a photo ionization detector.



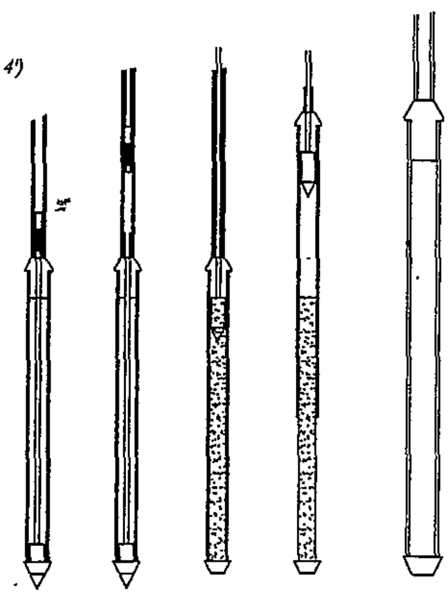

**Basics**

- Hydraulic powered probe unit isoperated from a engine driven pump.
- Remote vehicle ignition allows operator to start engine from probe unit.
- Belt driven hydraulic pump supplies 10 gpm @ 2000 rpm, 3000 psi operating pressure
- Probe unit folds for transport
- Unit utilizes static weight of vehicle and pecussion hammer to advance probing tools.
- Hydraulic hammer delivers pecussion rate of 30 Hz.
- Probes have greater than 18,000 lbs of down force and 25,000 lbs of retraction force.
- Drives multiple diameter probes (1", 1.25" and 2.25") to depths over 100 feet.

Soil Probing Tool

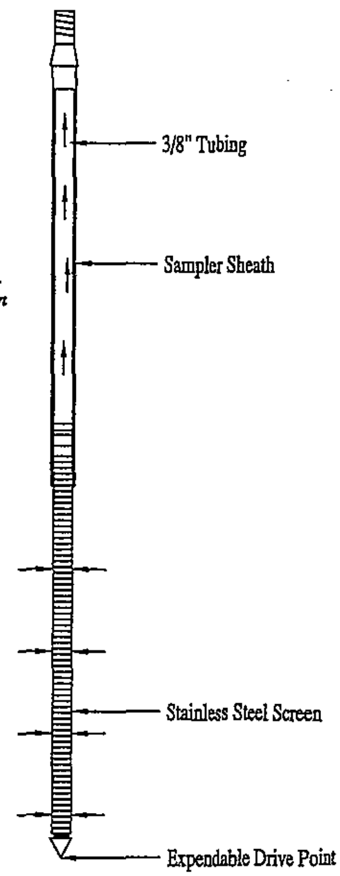
*The tools are advanced and a sample is acquired in a non-reactive plastic sheathing. The system offers two sizes of sample retrieval:*

*Large bore - 1.5" x 2'*
*Macro - 2.25" x (2', 3' & 4')*



Groundwater SP-15 Sampler

*The tool allows a stainless steel, 4' screen to be delivered to the underlying groundwater. At the desired depth, the screen is retracted and samples are obtained via a check valve assembly.*




IMPACT ENVIRONMENTAL
a division of Impact Environmental Consulting Inc.
1 Village Plaza
Kings Park, New York 11754

Diagram 1: Geoprobe Operating System

Legend:
groundwater probe node
soil probe node

GMEI-00248

## 5.4 Field Screening

Headspace analysis will be performed on each of the acquired samples utilizing a portable photo ionization detection meter to measure what, if any, hydrocarbon concentrations were present in isolated portions of the secured samples. Headspace analysis will be conducted by partially filling a wide-mouth glass container with sample aliquot and sealing the top with aluminum foil, thereby creating a void. This void is referred to as the sample headspace.

To facilitate the detection of any hydrocarbons contained within the headspace, the container will be agitated for a period of thirty (30) seconds and will be set aside for fifteen minutes to allow any organic compounds to volatilize. The probe of the vapor analyzer will then be injected through the foil into the headspace to measure the hydrocarbon concentrations present. A Photovac Micro-Tip, photo ionization detection meter (PID) will be the organic vapor analyzer selected for the headspace analysis. A PID utilizes the principle of photo ionization for detection and measurement of hydrocarbon compounds. A PID does not respond to all compounds similarly; rather, each compound has its own response factor relative to its calibration. For this investigation, the PID will be calibrated to isobutylene. Hydrocarbon relative response factors for a PID calibrated to isobutylene are published by the manufacturer.

## 5.5 Temporary Well Point Sampling

The groundwater sampling system that will be used is the Screen Point 15 that is designed to accurately collect grab samples of groundwater. The Screen Point 15 uses a screen with a standard slot size of 0.004 inches that is sealed inside a 1.5-inch ID alloy steel sheath as it is driven to depth. The screen is sealed inside the sheath with Neoprene O-rings, which prevents infiltration of formation fluids until the desired depth is attained. When the screen has been driven to the depth of interest in the formation, extension rods are used to hold the screen in position as the driving rods are retracted approximately 4 feet. The 4-foot long sampler sheath forms a seal above the screen as it is retracted. A total of 41.5 inches of slotted screen is placed into contact with the formation. The Screen Point 15 groundwater sampler has a total boring diameter of 1.5 inches and the outside diameter of the screen is 1.0 inch. This provides for a maximum of 0.25 inches between the screen and the natural formation as the sampler sheath is retracted. These conditions approach the ideal for natural formation development that can be conducted when lower turbidity samples are required.

Each groundwater sample will be collected from the sampler utilizing 3/8-inch in diameter disposable tubing equipped with a bottom check valve. The tubing is extended from the surface down to the sampler. The tubing is oscillated in a controlled manner to avoid excessive turbulence that would result in a loss of volatile analytes from the sample. The collection will continue until the check valve has trapped an adequate volume to expunge three bore hole volumes, to develop the temporary well, before the groundwater sample is collected for analysis. The tubing is then removed and the water is poured into appropriate sample vessels for subsequent laboratory analysis.

## 5.6 Groundwater Monitoring Well Installation

The new wells will be constructed using a five and one-half inch diameter hollow stem auger. The auger annulus will allow for the installation of a two-inch monitoring well casing and wire wrapped screen section. The screen slot size will be a function of the gradation of the filter pack (able to hold back at 95% of the filter pack). A filter pack will be installed within the annular space of the auger. The filter pack will extend to a depth of six inches below the bottom of the well screen to a point one-foot above the water table. The material used for the filter pack will consist of clean siliceous sand. The grain size of the filter pack sand will be three to five times the average (50% passing) size of the formation material as determined from sieve analysis. This will minimize the amount of the material entering the well from the screened part of the formation and, at the same time, not inhibit water inflow into the well. A Bentonite seal will be placed above the filter pack using a tremie pipe to form a seal at least three feet thick. A finer grained siliceous sand pack will be utilized for the remainder of the well to a point approximately two feet below the manhole cover.

Each of the wells will be constructed of two-inch schedule PVC riser, screened at a discrete interval in the saturated soil column. Groundwater at the site occurs under unconfined conditions at approximately 55 feet below grade. The screen casing of the proposed wells will be installed at depths ranging from 8 feet below to 2 feet above the groundwater interface. The screened length of each of the wells will be ten-feet. The wells will be constructed of PVC, as it possesses the required tensile strength (risers and threading) to accommodate the required installation depths. Additionally, PVC is resistant and non-reactive with contaminants typically found in landfill plumes and thus will be appropriate material for long term performance without contributing or removing contaminants from the groundwater. The PVC riser and screens will be interconnected with standard flush threaded couplings (ASTM F-480) containing fluorocarbon (Viton) O-rings. A filter pack will be installed around the outside of each well using a tremie pipe. The material used for the filter pack will consist of uniform clean siliceous sand. The PVC screens will be wire wrapped.

A bentonite seal will be placed above the filter pack using a tremie pipe to form a seal at least three feet thick. The balance of the casing annulus will be filled with grout to the ground surface. The grout will consist of a commercially available high-solids cement/bentonite grout. The grout mixture will set up without being diluted by formation of water, and will displace water in the annular space to ensure a continuous seal. The grout will be placed under pressure using a tremie pipe.

An eight-inch steel casing (manway) will be placed over the two-inch diameter protective screened casing and secured in a surface well seal to adequately protect it. Each monitoring well will be fitted with a secured protective flush-mounted casing. The flush mounted casing will be outfitted with an internal drain consisting of a layer of Morie sand or equivalent in direct contact with the surrounding formation. A vent hole will be located near the top of the steel casing to prevent explosive gas build up and to allow well water levels to respond naturally to changes in barometric pressure. The annulus of the casing will be filled with gravel. A twelve-inch weather sealed locking cap will have at least two inches of clearance between the top of each well cap and the bottom of the locking cap. If necessary, duplicate keys to the locking cap will be submitted to the NYSDEC.

A concrete surface seal will be constructed. The surface seal will extend below the frost line. The top of the seal will be constructed by pouring concrete into a form with a minimum two-foot side. The seal will prevent surface runoff from ponding and entering the well casing. In areas of excessive vehicle traffic, protective bollards will be installed around the seal. Complete construction diagrams for the proposed wells are provided in **Appendix B.**

### *5.6.1 Groundwater Monitoring Well Development and Sampling Procedure*

The development and sampling procedures will conform to NYSDEC protocol. A field log protocol will be conducted to record sampling data including; date, time, location, sample identification code, depth to water, total depth of the well, method of well development, and sampling technique.

The monitoring wells will be developed by purging a minimum of three (3) static well volumes utilizing a disposable bailer. A static well volume is defined as:

$$\textit{Static well volume} = \textit{height of water column} \times (\textit{well radius})^2 \times \pi \times 7.48$$

where 7.48 is the conversion factor for cubic feet to gallons

Groundwater samples will be acquired from each monitoring well utilizing a dedicated Voss disposable bailer to prevent cross-contamination. All of the samples will be transferred with minimal disturbance into the appropriate vessels, preserved at 4°C in a cooler and transported under proper chain-of-custody procedures laboratory for analysis.

## 6. Record Keeping and Documentation

A Site field log and a master sample log will be used on-site to record notes pertaining to the sampling. For the groundwater wells, a monitoring well boring log will be used to record information. A sample form is provided in Appendix C.

Chemtech Laboratories, Inc. will be used for all laboratory work in this study. A statement of qualifications for Chemtech can be found in Appendix D.

### 6.1 Sample Tracking System

In order to provide for proper identification in the field, and proper tracking in the laboratory, all samples must be labeled clear and in a consistent fashion using the procedures and protocols described below and with the following subsections.

Sample labels will be waterproof and have a pre-assigned, unique number that is indelible.
Field personnel must maintain a field notebook. This notebook must be water resistant with sequentially numbered pages. Field activities shall be sequentially recorded at a later time. The notebook, along with the chain of custody form, must contain sufficient information to allow reconstruction of the sample collection and handling procedure at a later time. Each sample shall have a corresponding notebook entry that includes:

Sample ID number
Well location and number
Date and time
Analysis for which sample was collected
Additional comments as necessary
Sampler's name

Each sample must have a corresponding notebook entry on a chain-of-custody form. The manifest entry for sampling at any one well is to be completed before sampling is initiated by the same sampling team at any other well. In cases where the samples leave the immediate control of the sampling team, the samples must be sealed.

### 6.2 Sample Identification System

Each sample collected shall be designated by an alphanumeric code that shall identify the type of sampling location, the specific location, the matrix sampled, and a specific sample designation. Site specific procedures are described below.

Sample identifications shall contain a sequential code consisting of three segments. The first segment shall designate the project number. The second segment shall identify the location type. Location types shall be identified by a two-letter code. For example, MW will be used for monitoring well and GP for geoprobe. The third segment shall identify the specific sample location. The specific sampling location shall be identified using a three-digit number.

The fourth segment shall identify the matrix type and sample designation or identifier that identifies the sample depth, the sample event number, or other designation depending on the sample type. The matrix type shall be designated by a two-letter code. For example: GW will be used for groundwater. The sample identifier shall be represented by a two digit numeric code. Sampling events or rounds, such as for groundwater sampling shall be numbered in sequence beginning with "01" that corresponds to the round of sampling.

The following shall be a general guide for sample identification:

| First Segment | Second Segment | Third Segment | Fourth Segment |
|---|---|---|---|
| NNN | AA | NNN | AANN |
| Project # | Location Type | Specific Type | Matrix Sample Identifier |
| | | | |
| 963 | MW | 281 | GW01 |

Symbol Definitions:
A = Alphabetic
N = Numeric

Location Type:
MW = Monitoring Well
GP = Geoprobe

Matrix Type:
S = Soil
GW = Groundwater

Sample Identifier:
1st round of sampling = 01
2nd round of sampling = 02

## 6.3 Sample Containers and Analytical Requirements

As required in the NYSDEC Analytical Sampling Protocol (ASP), the laboratory must provide all sample containers. If glass bottles are used, extra glass bottles will be obtained from the laboratory to allow for accidental breakage that may occur. Necessary preservatives will be placed in the sample bottles by the laboratory. The sample bottles will be handled carefully so that preservatives and glassware are not inadvertently spilled. All soil samples will be put into 4-ounce glass jars with Teflon liners. All liquid samples will be put into 40-ml glass vials with Teflon liners.

## 6.4 Sample Packaging

Samples shall be packaged and shipped according to Section 6.2 of the USEPA's *Compendium of Superfund Field Operations Methods* entitled, "Packaging, Labeling, and Shipping." Chain of custody forms, sample labels, custody seals, and other sample documents shall be filled out as specified in the USEPA *CLP Users Guide*. Sample bottles and samples shall either be delivered/picked up at the site daily by Chemtech Laboratories, or delivered via overnight courier.

The proper procedures for packaging and shipping must be followed once the samples have been collected.

<u>Packaging</u>

Prior to shipment, samples must be packaged in accordance with current US DOT regulations. All required government and commercial carrier shipping papers must be filled out. The procedure below should be followed regardless of transport method.

As required in the NYSDEC ASP, samples will be transported in metal ice chests or sturdy plastic coolers.

Remove previously used labels, tape, and postage from cooler.

Ship filled sample bottles in same cooler in which empty bottles were received.

Check that all bottle labels are complete.

Check that all sample bottles are tightly capped.

Affix return address labels.

Be sure that chain-of-custody forms are complete.

Wrap sample bottles in bubble pack and place in cooler.

Pack bottles with extra bubble pack, vermiculite, or Styrofoam.

Keep samples refrigerated in cooler with bagged ice or frozen cold packs. Do not use ice for packing material.

Separate and retain the sampler's copy of chain-of-custody.

Tape paperwork in zipper bag to inside of cooler lid.

Close cooler and apply signed and dated custody seal in such a way that the seal must be broken to open the cooler.

Securely close cooler lid with packing or duct tape. Be sure to tape latches and drain plugs in closed position.

<u>Shipping</u>

Samples should arrive at the lab as soon as possible following sample collection to ensure holding times are not exceeded. All samples must be hand delivered on the same day as sampling or sent via overnight courier. Coolers will contain ice packs to maintain a temperature below 4 °F. Samples will be delivered to the laboratory within the seven-day holding period prescribed for VOC analysis.

## 6.5 Sampling Documentation

The sample team or individual performing a particular activity shall be required to keep a weatherproof field notebook. Field notebooks are intended to provide sufficient data and observations to enable participants to reconstruct events that occurred during projects and to refresh the memory of the field personnel if called upon to give testimony during legal proceedings. In a legal proceeding, notes, if referred to, are subject to cross-examination and are admissible as evidence. The field notebook entries should be factual, detailed, and objective. All entries are to be signed and dated. All members of the field investigation team are to use this notebook, which shall be kept as a permanent record. The field notebook shall be filled out at the location of sample collection immediately after sampling. It shall contain sample descriptions including: sample number, sample collection time, sample location, sample description, sampling method used, daily weather conditions, field measurements, name of sampler, and other site-specific observations. The field notebook shall contain any deviations from the protocol contained herein, visitor's names, community contacts made during sampling, and geologic and other site-specific information that may be noteworthy.

Chain-of-custody forms, sample labels, custody seals, and other documents shall be filled out as specified in Section 4.0 of the USEPA *A Compendium of Superfund Field Operations Manual,* 1987. Additionally, a dedicated sampling master log shall be maintained as the field program progresses. The sample logbook shall contain the sample number, sample date/time, sampling team, and chain-of-custody.

## 6.6 Chain-of-Custody Protocol

The primary objective of the sample custody procedures is to create an accurate written record that can be used to trace the possession and handling of all samples from the moment of their collection, through analysis, until their final disposition. Sample custody for samples collected during the investigation will be maintained by the on-site hydrogeologist or the field personnel collecting the samples. Field personnel are responsible for documenting each sample transfer and maintaining custody of all samples until they are shipped to the laboratory.

Chain-of-custody forms will be completed at the time of sample collection and will accompany the samples inside the cooler for shipment to the selected laboratory.

# 7. Performance Criteria

## 7.1 Field and Consulting Engineering Services

Impact Environmental Consulting, Inc. ("contractor") and its designated subcontractors, will perform all field activities. The subcontractors that are anticipated to be used for the performance of the FRI are presented below:

Chemtech, Inc. (*Certified Laboratory*)
110 Route 4
Englewood, NJ 07631
(201) 567-6868

Fenley and Nicol Environmental (*Well Installation*)
445 Brook Avenue
Deer Park, New York 11729
(631) 586-4900

Tank Specialists, Inc. (*Excavation*)
2 Park Place
Glen Cove, New York
(516) 759-9318

## 7.2 Site Representation

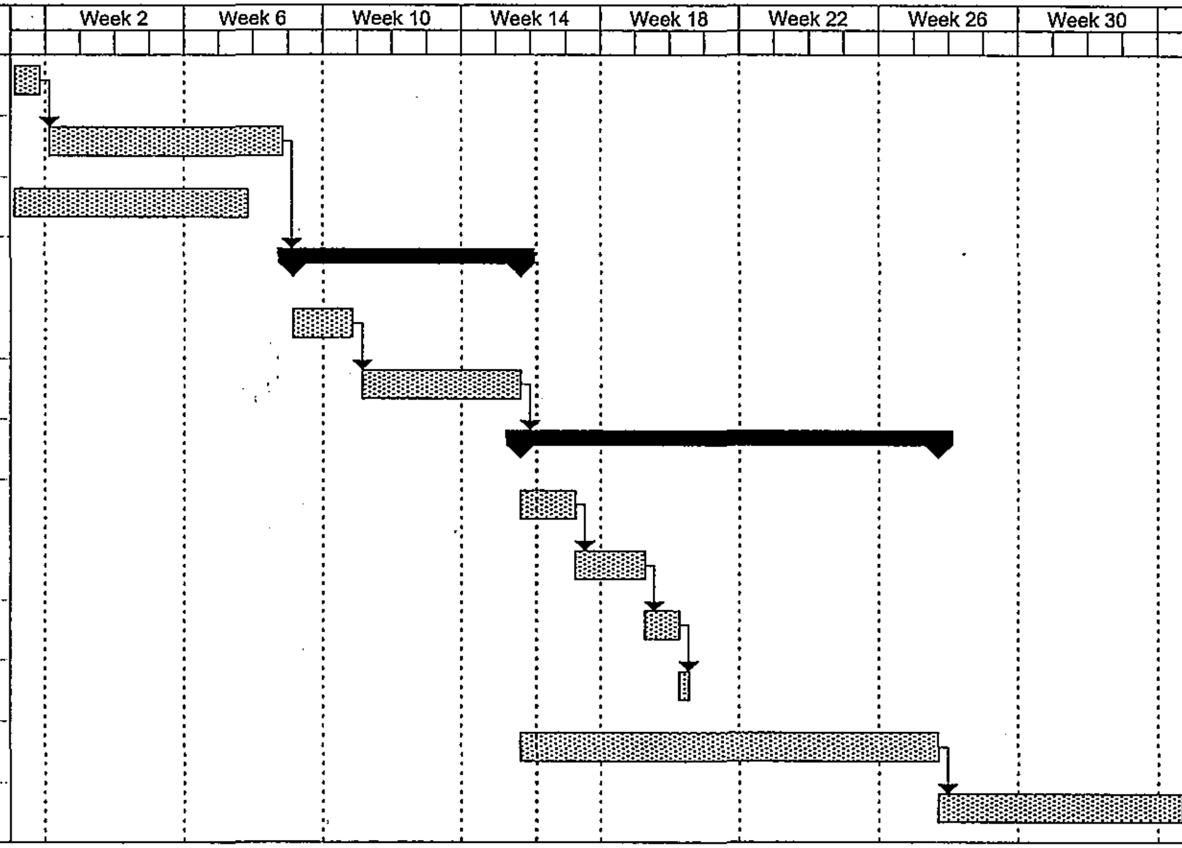
All on-site activities will be supervised by a representative of Grand Machinery Exchange, Inc. that is qualified to audit all field mobilization and investigative activities. Said representative will be identified as the Project Field Manager. The Project Field Manager will be on-site during the performance of all work performed by the contractor and its subcontractors. The qualifications of key personal including the Project Field Manager are provided in Appendix E.

## 7.3 Chronological Description of FRI

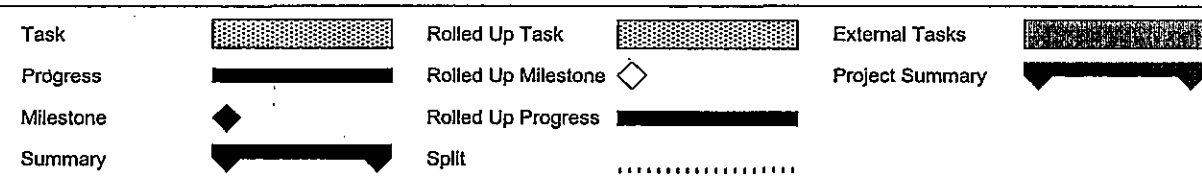
The time line that will be used for the study is outlined in **Table 3:** FRI Performance Schedule.

**Table 3: FRI Performance Schedule**
36 Sylvester Street Site No. 1-30-043U

| ID | Task Name |
|---|---|
| 1 | Submittal of Work Plan |
| 2 | Approval of Work Plan |
| 3 | Site Background Study |
| 4 | **Site Investigation Activities** |
| 5 | Site Visit |
| 6 | Remote Sensing Survey |
| 7 | **Investigation of Soil and Groundwater Quality** |
| 8 | Soil Sampling |
| 9 | Geoprobe Groundwater Sampling |
| 10 | Monitoring Well Installation |
| 11 | Monitoring Well Sampling |
| 12 | Laboratory Analysis |
| 13 | Report Preparation |




**Impact Environmental**
*a division of impact environmental consulting, inc.*




GMEI-00257

# 8. Health and Safety Plan

## 8.1 Introduction

This Health and Safety Plan (HASP) describes the procedures to be followed in order to reduce employee exposure to potential health hazards that may be present at the project site. The emergency response procedures necessary to respond to such hazards are also described within this HASP.

### *8.1.1 Purpose*

The purpose of this HASP is to provide the contractor's field personnel, subcontractors, and other visitors with an understanding of the potential chemical and physical hazards that exist or may arise while the tasks of this project are being performed.

### *8.1.2 Objective*

This Health and Safety Plan is required in accordance with OSHA 29 CFR 1910.120. The primary objective is to ensure the well being of all field personnel and the community surrounding this site. In order to accomplish this, project staff and approved subcontractors shall acknowledge and adhere to the policies and procedures established herein. Accordingly, all personnel assigned to this project shall read this HASP and sign the Agreement and Acknowledgment Statement (Appendix) to certify that they have read, understood, and agree to abide by its provisions.

The contractor's personnel have the authority to stop work performed by our sub-contractors at this site if said work is not performed in accordance with the requirements of this HASP.

### *8.1.3 Amendments*

Any changes in the scope of work of this project and/or site conditions must be amended in writing and approved by the appropriate agency.

## 8.2 Emergency Response

In order to properly prepare for emergencies, personal protective equipment (PPE) will be worn by site workers and first aid equipment will be kept at the site. Material Safety Data Sheets (MSDS) will be maintained for all contaminants that workers may be exposed to.

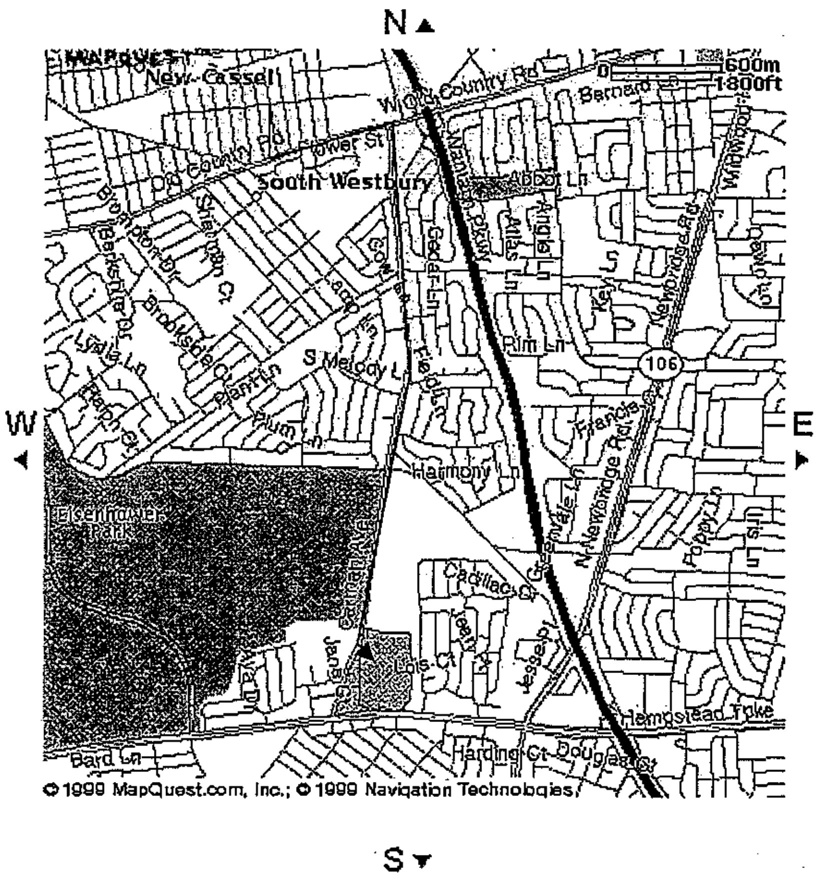
*8.2.1 Onsite Emergency Response*

In the event of an accident or emergency situation, emergency procedures will be executed. Said procedures can and will be executed by the first person to observe an accident or emergency situation. The Project Field Manager will be notified about the situation immediately after emergency procedures are implemented. A list of the pertinent personnel authorized to be present on site is as follows:

| Title | Name | Telephone Number |
|---|---|---|
| Project Manager | Richard Parrish | (631) 269-8800 |
| Project Field Manager | Keith Franzen | (631) 269-8800 |
| Quality Assurance Officer | Kevin Kleaka | (631) 269-8800 |
| Site Safety Officer | Eric Krist | (631) 269-8800 |
| Site Contact | Paul Merandi | (212) 226-5356 |
| State Agency Contact (NYS DEC) | Richard Lilly | (518) 457-1708 |

*8.2.2 Emergency Contacts*

| | |
|---|---|
| Ambulance/Emergency: | *Nassau County Medical Center* 516-572-6655 |
| Police: | 911 or *Westbury Police Dept.* 516-573-5275 |
| Fire Department: | *Westbury Fire Dept.* 516-921-0000 |
| Poison Control Center: | 800-336-6997 |
| Hospital: | *Nassau County Medical Center* 516-572-0123 |
| Directions: | Take Sylvester Street south and turn left onto Old Country Road. Continue east on Old Country Road and turn right onto Carman Ave. Travel approximately two miles south on Carman Ave. and the hospital will be on the left immediately after the Nassau County Jail. See map of route below. |




State Police: 516-756-3300
National Response Center: 800-424-8802
US EPA (24-hour hotline): 800-424-9346

*8.2.3 Who to Contact Before Initiating Subsurface Investigation Work*

Impact Environmental Consulting, Inc. ("Impact") representatives are responsible for contacting appropriate agencies prior to conducting on-site activities when applicable.

Gas Company: *Brooklyn Union Gas* 718-643-4050
Telephone Company: *Bell Atlantic* 516-661-6000
Electric Company: *Marketspan* 516-222-7700

### 8.2.4 Contingency / Evacuation Plan

It may be possible that a site emergency could necessitate the evacuation of all personnel from the site. If such a situation develops, an audible alarm shall be given for site evacuation (consisting of an air horn). Personnel shall evacuate the site in a calm and controlled fashion and regroup at a predetermined location. The route of evacuation will be dependent on wind direction, severity, type of incident, etc.

The site must not be re-entered until back-up help, monitoring equipment, and/or personal protective equipment are on hand and the appropriate regulatory agencies have been notified.

### 8.2.5 Standard Procedures for Injury

1. Telephone for ambulance/medical assistance if necessary. Whenever possible, notify the receiving hospital (listed in 9.1.2) of the nature of physical injury or chemical overexposure. If no phone is available, transport the person to the nearest hospital.
2. Bring this Health and Safety Plan with the attached MSDSs to the medical facility with the injured person.
3. If the injury is minor, proceed to administer first aid.
4. Notify the Site Safety Officer and Project Manager of all accidents, incidents, and near emergency situations.

### 8.2.6 Emergency Treatment

When transporting an injured person to a hospital, bring this Health and Safety Plan to assist medical personnel with diagnosis and treatment. In all cases of chemical overexposure, follow standard procedures as outlined below for poison management, first aid, and, if applicable, cardiopulmonary resuscitation. Different routes of exposure and their respective first aid/poison management procedures are outlined below.

### 8.2.7 Ingestion

Do not induce vomiting unless prompted by a health professional. Transport person to nearest hospital immediately.

### 8.2.8 Inhalation / Confined Space

Do not enter a confined space to rescue someone who has been overcome unless properly equipped and a standby person present.

### 8.2.9 Inhalation / Other

Move the person from the contaminated environment. Initiate CPR if necessary. Call or have someone call for medical assistance. Refer to MSDS for additional specific information. If necessary, transport the victim to the nearest hospital as soon as possible.

### 8.2.10 Skin Contact / Non-Caustic Contaminant (Petroleum, Gasoline, etc.)

Wash off skin with a large amount of water immediately. Remove any affected clothing and rewash skin using soap, if available. Transport person to a medical facility if necessary.

### 8.2.11 Skin Contact / Corrosive Contaminant (Acids, Hydrogen Peroxide, etc.)

Wash off skin with a large amount of water immediately. Remove any affected clothing and rewash skin with water. Transport person to a medical facility if necessary.

### 8.2.12 Eyes

Hold eyelids open and rinse the eyes immediately with large amounts of water for 15 minutes. Never permit the eyes to be rubbed. Transport person to a medical facility as soon as possible.

## 8.3 Informational Summary

### 8.3.1 Health and Safety Summary

Site Specific chemicals of Concern: Benzene, MTBE, Tetrachloroethene, Toluene, Trans 1,2 Dichloroethane, Trichloroethene, Xylene(s), 1,1,1 Trichloroethane, 1,1 Dichloroethane, 1,1 Dichloroethene and Vinyl Chloride.

These chemicals are of moderate to low hazard. Therefore, modified level D personal protective equipment will be required at all times when on site. Changes to this requirement will be required as follows.

Level C protection, as described in this plan, will be available at a minimum for those activities that involve surface and subsurface soil (strata disturbance, such as well installation, and all subsurface media sampling activities such as split-spoon sampling and borings).

The Site Safety Officer will determine whether or not a level of protection can be upgraded or downgraded. Changes in the level of protection will be recorded in the dedicated site logbook along with the rationale for the changes. Level D protection may be used for those activities that do not pose a potential threat of exposure to toxic or hazardous substances. Typical Level D activities may include sediment, logging and groundwater sampling, as well as surficial site surveys. Level C protection equipment should be readily available at all times. Consistent with OSHA training, prior to donning Level C, oxygen percent must be continuously monitored.

Action levels represent those conditions that a person requires an upgrade of personal protective equipment (PPE). Organic concentrations are to be monitored in the field by the use of a flame ionization or photo ionization detector (FID or PID) with readings being taken in a breathing zone occupied by field personnel to determine whether an action level has been exceeded. The information presented below applies to the above chemical constituents. All air monitoring results should be logged in the Site Safety Log.

All initial site access and activities will be done in Level D attire.

**Ionization Detector Response**

Flame Ionization Detector (FID)

| Concentrations (in ppm) | Level of PPE Required |
|---|---|
| 0.0 to 5.0 | Level D |
| 5.0 to 250.0 | Level C |
| 250.0 to 750.0 | Level B |
| Above 750.0 | Immediately withdraw from the area |

**Combustible Gas Response**

Combustible Gas Indicator (CGI)

| Results (% of LEL) | Procedure |
|---|---|
| 0.0 to 20.0 | Continue with normal activity |
| Above 20.0 | Immediately withdraw from the area |

**Oxygen Detector Response**

Combustible Gas Indicator (CGI)

| Results (% Oxygen) | Procedure |
|---|---|
| 0.0 to 19.5 | Level B PPE is required |
| 19.5 to 23.0 | Continue with normal activity |
| Above 23.0 | Immediately withdraw from the area |

## 8.4 Hazard Evaluation

### *8.4.1 Site Tasks*

The field tasks covered by the HASP may include well installation, development, gauging, and bailing; soil & groundwater handling/sampling; and confined space (excavation) entry and job task hazards.

### *8.4.2 Job Task Hazards*

The following hazards may be encountered.

• Organic Vapors

The inhalation of volatile organic vapors during all operations can pose a potential health hazard. Hazard reduction procedures include monitoring the ambient air with a FID and the use of appropriate PPE. Workers should stand upwind of the source of contamination whenever possible.

• Flammable Vapors

The presence of flammable vapors can pose a potential fire and health hazard. Hazard reduction procedures include monitoring the ambient air with an oxygen/LEL meter (combustible gas indicator). If the LEL reading exceeds 20%, leave the site immediately and contact the fire department.

• Oxygen

Atmospheres that contain a level of oxygen greater than 23% pose an extreme fire hazard (the usual ambient oxygen level is approximately 20.5%). This hazard can be compounded by the fact that vapors associated with this site are highly flammable. All personnel encountering atmospheres that contain a level of oxygen greater than 23% must evacuate the site immediately and must notify the Fire Department. If the oxygen level is less than 19.5%, do not enter the space without level B PPE.

• Vehicular Traffic

All employees will be required to wear a fluorescent safety vest at all times while on site. In addition, supplemental traffic safety equipment use can be exercised when warranted by specific task. Supplemental equipment can be items such as cones, flags, barricades, and/or caution tape.

### *8.4.3 Well Installation, Development, Gauging, Bailing; Soil & Groundwater Sampling*

Skin and eye contact with contaminated groundwater and/or soil may occur during these tasks. Nitrile gloves and approved safety glasses must be worn.

*8.4.4 Sample Preservation*

When hydrochloric acid is used, skin and eye contact can occur. This hazard can be reduced with the use of Nitrile gloves and safety glasses. Safety goggles should be worn if there is a potential for a splash hazard.

*8.4.5 Cleaning Equipment*

Skin and eye contact with methanol, "Alconox", or other cleaning substances can occur while decontaminating equipment. This hazard can be reduced with the use of Nitrile gloves and safety glasses.

*8.4.6 Confined Space Entry*

Excavation pits, storage tanks, soil trenches, subsurface vaults, basements, and sheds are examples of confined spaces. Confined spaces can be identified as an area having one of the following characteristics:

- Limited access and egress
- Unfavorable for natural ventilation
- Not designed for continuous human occupancy

Organic and/or combustible vapors may be trapped in confined spaces, resulting in lack of oxygen (anoxia) and/or overexposure to vapors. When site work takes place in a confined space, the air must be monitored for oxygen level, flammable vapors, and toxic vapors. The following air monitoring procedures must be followed before entering a confined space.

a. Oxygen Level

Monitor for percent oxygen with an oxygen/LEL meter (e.g., CGI) to ensure an oxygen level between 19.5 and 23%. Because of the high vapor density of the contaminants associated with this site, there is a high probability that vapors in the enclosed spaces or vaults will replace any oxygen that is present, even if the space is open to the air. Therefore, oxygen level monitoring will be done at the top, middle, and bottom of the enclosed space to determine if there is a minimum acceptable oxygen level of 19.5% prior to entry. The oxygen/LEL meter is factory-set to sound an alarm at levels less than 19.5% oxygen. **If oxygen is less than 19.5% or greater than 23%, do not enter the space.**

b. Explosive Vapors

Monitor the percentage of the Lower Explosive Limit (LEL) with an oxygen/LEL meter to determine whether vapor concentrations within the confined space are within the flammable range. If LEL readings exceed 10%, personnel should exercise extreme caution, use non-sparking tools, and utilize ventilation engineering controls to reduce LEL levels. The oxygen/LEL meter is factory set to sound an alarm at levels greater than 20% LEL. If LEL readings exceed 20%, **personnel MUST leave the site immediately and contact the project manager.**

c. Toxic Vapors

Monitor for toxic vapors with a FID (e.g., Photovac OVA) to determine whether toxic vapors within the confined space exceed the action levels. PID readings will be taken at the top, middle, and bottom of a vault, shed, or other confined space to determine vapor levels.

Summary

Do not enter the confined space unless:

• the oxygen concentration is between 19.5 and 23%;
• the LEL is less than 20%; and
• FID readings are less than 250 ppm (a respirator must be worn if the readings exceed 5 ppm)

All monitoring equipment must be calibrated and maintained in accordance with manufacturer's recommendations.

*8.4.7 Occupational Noise*

Requirements set forth in the OSHA Hearing Conservation Regulation (OSHA 1910.95) shall be adhered to during work on-site. Hearing protection shall be provided to the employees where sound pressure levels exceed 85 dB. Hearing protection shall be worn where sound pressure levels in areas and/or on equipment exceeds 90 dB. Typical drilling operations have been monitored with a sound level meter and indicate that hearing protection is required for all personnel while engaged in this action.

*8.4.8 Heat Stress*

Since climatic changes cannot be avoided, work schedules will be adjusted to provide time intervals for intake of juices, juice products, and water in an area free from contamination and in quantities appropriate for fluid replacement.

Heat stress may occur even in moderate temperature areas and may present any or all of the following:

A. Heat Rash

Result of continuous exposure to heat, humid air, and chafing clothes. Heat rash is uncomfortable and decreases the ability to tolerate heat.

B. Heat Cramps

Result of the inadequate replacement of body electrolytes lost through perspiration. Signs include severe spasms and pain in the extremities and abdomen.

C. Heat Exhaustion

Result of increased stress on the vital organs of the body in the effort to meet the body's cooling demands. Signs include shallow breathing; pale, cool, moist skin; profuse sweating; and dizziness.

D. Heat Stroke

Result of overworked cooling system. Heat stroke is the most serious form of heat stress. Body surfaces must be cooled and medical help must be obtained immediately to prevent severe injury and/or death. Signs include red, hot, dry skin, absence of perspiration, nausea, dizziness and confusion, strong, rapid pulse, coma, and death.

Heat Stress Prevention

A. Replace body fluids (water and electrolytes) lost through perspiration. Solutions may include a 0.1% salt and water solution or commercial mixes such as "Gatorade". Employees must be encouraged to drink more than the amount required in order to satisfy thirst.

B. Use cooling devices to aid the natural body ventilation. Cooling occurs through evaporation of perspiration and limited body contact with heat-absorbing protective clothing. Utilize fans and air conditioners to assist in evaporation. Long, cotton underwear is suggested to absorb perspiration and limit any contact with heat-absorbing protective clothing (i.e., coated Tyvek suits).

C. Conduct non-emergency response activities in the early morning or evening during very hot weather.

D. Provide shelter against heat and direct sunlight to protect personnel. Take breaks in shaded areas.

E. Rotate workers utilizing protective clothing during hot weather.

F. Establish a work regime that will provide adequate rest periods, with personnel working in shifts.

Heat Stress Monitoring

Heat stress may occur even in moderate temperatures and may present heat rash, heat cramps, heat exhaustion, and/or heat stroke.

Monitoring procedures should be implemented to prevent heat stress arising from environmental conditions, use of PPE, and/or intensity of workload.

For temperatures above 70 °F, the following regime shall be followed for workers wearing permeable coveralls:

| Adjusted Temperature | Normal Ensemble | Impermeable Ensemble |
|---|---|---|
| 90 °F or above | After 45 min. of work | After 15 min. of work |
| 87.5 to 90 °F | After 60 min. of work | After 30 min. of work |
| 82.5 to 87.5 °F | After 90 min. of work | After 60 min. of work |

| | | |
|---|---|---|
| 77.5 to 82.5 °F | After 120 min. of work | After 90 min. of work |
| 72.5 to 77.5 °F | After 150 min. of work | After 120 min. of work |

Workers wearing semi-permeable or impermeable encapsulating protective clothing should be monitored for heart rate and temperature when the temperature in the work area is above 70 °F. In order to monitor the worker, measure:

A. Heart rate - Count the radial pulse during a 30-second period as early as possible in the rest period. If the heart rate exceeds 110 beats per minute at the beginning of the rest period, shorten the next work cycle by one-third.

B. Oral temperature - Use a clinical thermometer or similar device to measure the oral temperature at the end of the work period (before drinking). If oral temperature exceeds 99.6 °F, shorten the next work cycle by one-third.

Do not permit a worker to wear a semi-permeable or impermeable garment if the core body temperature exceeds 100.6 °F.

Workers shall not be required to continue working if they feel any of the symptoms of heat stress. Rest periods should be a minimum of 15 minutes. Length of rest period should be extended as appropriate or as recommended by the Site Safety Officer or alternate.

*8.4.9 Exposure: Cold Stress*

Work schedules will be adjusted to provide sufficient rest periods in a heated area for warming up during operations conducted in cold weather. Also, thermal protective clothing such as wind and/or moisture resistant outerwear is recommended to be worn.

If work is performed continuously in the cold at or below -7 °C (20 °F), including wind chill factor, heated warming shelters (tents, cabins, company vehicles, rest rooms, etc.) shall be made available nearby and the worker should be encouraged to use these shelters at regular intervals, the frequency depending on the severity of the environmental exposure. The onset of heavy shivering, frostnip, the feeling of excessive fatigue, drowsiness, irritability, or euphoria, are indications for immediate return to the shelter. When entering the heated shelter, the outer layer of clothing shall be removed and the remainder of the clothing loosened to permit sweat evaporation. A change of dry work clothing shall be provided as necessary to prevent workers from returning to their work with wet clothing.

Dehydration, or the loss of body fluids, occurs in the cold environment and may increase the susceptibility of the worker to cold injury due to a significant change in blood flow to the extremities. Warm sweet drinks and soups should be provided at the work site to provide caloric intake and fluid volume. The intake of coffee should be limited because of a diuretic and circulatory effect (Adapted from TLV's and Biological Exposure Indices 1988-1989, ACGIH).

## 8.5 Personal Protective Equipment

The following is a breakdown of the types of protective clothing and equipment to be used during the site activities. Personal protective equipment (PPE) is in conformance with EPA criteria for Level B, C, and D protection. All respiratory protective equipment used will be approved by NIOSH/MSHA.

Level C protection, as described in this plan, will be available at a minimum for those activities that involve surface and subsurface soil (strata disturbance such as well installation, and all subsurface media sampling activities such as split-spoon sampling and borings). Some activities may require Level B protection. In atmospheres potentially containing toluene and xylenes, the protective ensemble should include chemical resistant clothing since the two compounds have skin absorption potential.

The Site Safety Officer will determine whether or not a level of protection can be upgraded or downgraded. Changes in the level of protection will be recorded in the dedicated site logbook along with the rationale for the changes. Level D protection may be used for those activities that do not pose a potential threat of exposure to toxic or hazardous substances. Typical Level D activities may include sediment, logging and groundwater sampling, as well as surficial site surveys. Level C protection equipment should be readily available at all times. Consistent with OSHA training, prior to donning Level C, the percentage of oxygen must be continuously monitored.

Level D

- hard hat
- safety glasses
- steel toe and shank boots
- fluorescent vest
- splash goggles
- hearing protection (as appropriate)

Modified Level D

- hard hat
- safety glasses
- steel toe and shank boots

• fluorescent vest
• Nitrile "N-Dex" inner gloves
• latex outer boots (chemical resistant)
• splash goggles
• polyethylene coated Tyvek suit
• hearing protection (as appropriate)

Level C

• buddy system required at all times
• full face respirator with NIOSH approved OV/AG/HEPA combination cartridges (MSA GMC-H)
• Saranex coated Tyvek Suit
• inner Nitrile "N-Dex" gloves
• outer Nitrile (NBR) gloves
• steel toe and shank boots
• outer boots (chemical resistant)
• hard hat
• hearing protection (as appropriate)

Level B

Regional Health and Safety representatives must be on site upon start-up of any project requiring level B protection. This should be understood to include subcontractors conducting Level B activity.

• buddy system required at all times
• supplied air respirator or SCBA
• Saranex coated Tyvek Suit
• inner Nitrile "N-Dex" gloves
• outer Nitrile (NBR) gloves
• steel toe and shank boots
• outer boots (chemical resistant)
• hard hat
• hearing protection (as appropriate)

Note: Respirator cartridges will be changed once per day at a minimum. This can be accomplished at the end of the workday during respirator decontamination. If odor breakthrough is detected while wearing the respirator or if breathing becomes difficult, change cartridges immediately.

Contact with contaminated surfaces, or surfaces suspected of being contaminated, should be avoided. This includes walking through, kneeling in, or placing equipment in puddles, mud, discolored surfaces, or on drums and other containers. Eating, smoking, drinking, and/or the application of cosmetics in the immediate work area is prohibited.

When utilizing protective garments such as Tyvek suits, gloves, and booties, all seams between protective items will be sealed with duct tape.

The use of contact lenses on the job site is strongly advised against. However, when glasses are not available, contact lenses are preferred over faulty vision. When contact lenses are worn, safety glasses and/or goggles must be worn at all times while on the job site.

## 8.6 Decontamination

### *8.6.1 General*

Personnel involved in work activities at the site may be exposed to compounds in a number of ways, despite the most stringent protective procedures. Site personnel may come in contact with vapors, gases, mists, or particulates in the air, or other site media while performing site duties. Use of monitoring instruments and site equipment can also result in exposure and transmittal of hazardous substances.

In general, decontamination involves scrubbing with a detergent water solution followed by clean water rinses. All disposable items shall be disposed of in a dry container. Certain parts of contaminated respirators, such as harness assemblies and leather or cloth components, are difficult to decontaminate. If grossly contaminated, they may have to be discarded. Rubber components can be soaked in detergent and water and scrubbed with a brush. In addition to being contaminated, all respirators, non-disposable protective clothing, and other personal articles must be sanitized or replaced before they can be used again if they become soiled from exhalation, body oils, and perspiration. The manufacturer's instructions should be followed in sanitizing the respirator masks.

The Site Safety Officer will be responsible for the proper maintenance, decontamination, and sanitizing of all respirator equipment.

The decontamination zone layout and procedures should match the prescribed levels of personal protection. A detailed discussion for the establishment of the project decontamination zone and the procedures required for the various levels of personnel protection follows.

Exclusion Zone (EZ)

It is within this zone that the work activities are performed. No one shall enter this zone unless the appropriate PPE is donned.

Contaminant Reduction Zone (CRZ)

It is within this zone that the decontamination process is undertaken. Personnel and their equipment must be adequately decontaminated before leaving this zone for the support zone. This zone will be set up between the EZ and a well-ventilated open area.

Support Zone (SZ)

The support zone is considered to be uncontaminated; as such, protective clothing and equipment are not required but should be available for use in emergencies. All equipment and materials are stored and maintained within this zone. Protective clothing is put on in the SZ before entering the CRZ. The SZ will be established in a safe environment.

The following procedures have been established to provide site personnel with minimum guidelines for proper decontamination. Personnel leaving the point of operations designated as the EZ must follow these minimum procedures. The decontamination process shall take place at a reasonable distance away from any area of potential contamination.

### *8.6.2 Minimum Decontamination Procedure*

Personnel leaving the point of operations should wash outer gloves and boots. At a minimum, the outer boots shall be removed first and stored in an appropriate area or disposed of properly. Outer boots must be properly washed where gross contamination is evident. Personnel shall then remove and dispose of the Tyvek suits. Personnel should remove the Tyvek suits so that the inner clothing does not come in contact with any contaminated surfaces. After Tyvek removal, personnel shall remove and discard outer Nitrile gloves. Personnel shall then remove the respirator, where applicable. Respirators shall be disinfected between uses with towelettes or other sanitary methods. Potable water, at a minimum, will be present so that site personnel can thoroughly wash hands and face after leaving the point of operations.

Portable wash stations shall be utilized for easy and efficient access. The wash station shall consist of a potable water supply, hand soap, and clean towels. Portable sprayer units filled with Alconox solution and potable water should also be available to wash and rinse off grossly contaminated boots, gloves, and equipment. The Site Safety Officer will monitor decontamination procedures to ensure their effectiveness. Modifications of the decontamination procedure may be necessary as determined by the Site Safety Officer's observations.

*8.6.3 Standard Decontamination Procedure*

The following decontamination procedures should be implemented during site operations for the appropriate level of protection.

Level B

*Segregated equipment drop*

Deposit equipment (tools, sampling devices, notes, monitoring instruments, radios, etc.) used on the site onto plastic drop cloths.

*Boot covers and glove wash*

Outer boots and outer gloves should be scrubbed with a decontamination solution of detergent and water or replaced.

*Rinse off boot covers and gloves*

Decontamination solution should be rinsed off boot covers and gloves using generous amounts of water. Repeat as many times as necessary.

*Tape removal*

Remove tape from around boots and gloves and place into container with plastic liner.

*Boot cover removal*

Remove disposable boot covers and place into container with plastic liner.

*Outer glove removal*

Remove outer gloves and deposit in container with plastic liner.

*Suit / safety boot wash*

Completely wash splash suit, SCBA, gloves, and safety boots. Care should be exercised that no water is allowed into the SCBA regulator. It is suggested that the SCBA regulator be wrapped in plastic.

*Suit / safety boot rinse*

Thoroughly rinse off all decontamination solution from protective clothing.

*Tank or canister changes*

This is the last step in the decontamination procedure for those workers wishing to change air tanks and return to the EZ. The worker's air tank or cartridge is exchanged, new outer glove and boot covers are donned, and joints taped.

*Removal of safety boots*

Remove safety boots and deposit in container with a plastic liner.

*SCBA backpack removal*

Without removing the face piece, the SCBA backpack should be removed and placed on a table. The face piece should then be disconnected from the remaining SCBA unit and then proceed to the next station.

*Splash suit removal*

With care, remove the splash suit. The exterior of the splash suit should not come in contact with any inner layers of clothing.

*Inner glove wash*

The inner gloves should be washed with a mild decontamination solution (detergent / water)

*Inner glove rinse*

Generously rinse the inner gloves with water.

*Face piece removal*

Without touching the face with gloves, remove the face piece. The face piece should be deposited into a container that has a plastic liner.

*Inner glove removal*

Remove the inner glove and deposit into a container that has a plastic liner.

*Field wash*

Wash hands and face thoroughly. If highly toxic, skin corrosive, or skin absorbent materials are known or suspected to be present, a shower should be taken.

*Level C and Level D*

The decontamination procedure for Level C and Level D personal protection will employ applicable steps detailed in the Level B decontamination process.

### *8.6.4 Sampling Equipment and Sample Container Decontamination*

All non-disposable sampling equipment will be decontaminated with an Alconox / water solution followed by a clean water rinse. As an added precaution against cross-contamination, all non-disposable sampling equipment will be rinsed with distilled water. All disposable sampling equipment will be properly disposed of in dry containers.

Before leaving the site, all sample containers will be thoroughly decontaminated using a detergent and water solution followed by a clean water rinse. The decontamination procedure should include a complete scrubbing of the container's surface to remove possible contamination. Care must be exercised to prevent damage to sample container identification labels.

## 8.7 Health and Safety Requirements

### *8.7.1 Medical Monitoring Program*

A baseline physical examination must be conducted on all employees before they are permitted to engage in sampling, cleanup, and remedial action work. A complete medical survey should be completed on each employee upon start of employment. Yearly re-examination should be performed to update information on employee health status. Additional re-evaluation will be considered in the event of a chemical overexposure. These medical surveillance requirements shall comply with OSHA regulations as defined in 29 CFR 1910.120.

### *8.7.2 Training*

All personnel working at this site should have received a minimum of 40 hours of initial hazardous waste activity instruction, and a minimum of three days of field experience under direct supervision of a trained, experienced person. Personnel assigned to the site will also receive eight hours refresher training per year. On-site managers and supervisors directly responsible for employees engaged in hazardous waste operations have received an additional eight hours of supervisory training. These training requirements comply with the OSHA Hazardous Waste Operations and Emergency Response Regulation, 29 CFR 1910.120.

### *8.7.3 Visitor Policy*

All visitors and/or trainees on site must submit to the limitations described herein.

### *8.7.4 Work Zone Area*

Work and support areas shall be established based on ambient air data and proposed work sites. They shall be established in order to contain contamination within the smallest areas possible and shall ensure that each employee has the proper PPE for the area or zone in which work is to be performed.

### *8.7.5 First Aid Equipment*

Vehicles used for site work will be equipped with a first aid kit and safety equipment including:

- fluorescent vests
- cones (and flags as needed)
- hazard tape (barricades as needed)
- mounted fire extinguisher (10 pound A/B/C type)
- working flashlight
- water, suitable for drinking
- portable eye wash
- first aid kit with appropriate bandage material
- full body harness with lifeline (for confined space entry)

### *8.7.6 Fire Prevention*

During equipment operation, periodic vapor concentration measurements should be taken with an explosimeter or combustimeter. If at any time the vapor concentrations exceed 20% of the LEL, then the Site Safety Officer or designated field worker should immediately shut down all operations.

Only approved safety cans will be used to transport and store flammable liquids.

All gasoline and diesel-driven engines requiring refueling must be shut down and allowed to cool prior to filling.

Smoking is not allowed during any operations within the work area in which petroleum products or solvents in free-floating, dissolved, or vapor forms, or other flammable liquids may be present.

No open flame or spark is allowed in any area containing petroleum products or other flammable liquids.

### *8.7.7 Heavy Machinery / Equipment*

All site employees must remain aware of those site activities that involve the use of heavy equipment and machinery. Respiratory protection and protective eyewear may be worn frequently during site activities. This protective equipment significantly reduces peripheral vision of the wearer. Therefore, it is essential that all employees at the site exercise extreme caution during operation of equipment and machinery to avoid physical injury to themselves or others.

### *8.7.8 Additional Safety Practices*

The following are important safety precautions that will be enforced during work activities.

1. Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in any area designated as contaminated.
2. Hands and face must be thoroughly washed upon leaving the work area and before eating, drinking, or any other activity.
3. Whenever decontamination procedures for outer garments are in effect, the entire body should be thoroughly washed as soon as possible after the protective garments are removed.
4. No excessive facial hair that interferes with the effectiveness of a respirator will be permitted on personnel required to wear respiratory protection equipment. The respirator must seal against the face so that the wearer receives air only through the air purifying cartridges attached to the respirator. Fit testing shall be performed prior to respirator use to ensure the wearer obtains a proper seal.
5. Contact with potentially contaminated surfaces should be avoided whenever possible. One should not walk through puddles; kneel on the ground; lean, sit, or place equipment on drums, containers, vehicles, or the ground.
6. Medicine and alcohol can potentially increase the effect from exposure to certain compounds. Prescribed drugs and alcoholic beverages should not be consumed by personnel involved in the project.
7. Personnel and equipment in the work areas should be minimized, consistent with effective site operations.
8. Work areas for various operational activities should be established.
9. Procedures for leaving the work area must be planned and implemented prior to going to the site. Work areas and decontamination procedures must be established on the basis of prevailing site conditions.
10. Respirators will be issued for the exclusive use of one worker and will be cleaned and disinfected after each use.
11. Safety gloves and boots shall be taped to the disposable, chemical-protective suits as necessary.
12. All unsafe equipment left unattended will be identified by a "DANGER, DO NOT OPERATE" tag.
13. Noise mufflers or earplugs may be required for all site personnel working around heavy equipment. This requirement will be at the discretion of the Site Safety Officer. Disposable, form-fitting plugs are preferred.
14. Cartridges for air-purifying respirators in use will be changed daily at a minimum.

## 8.8 Project Personnel

### *8.8.1 Project Manager*

The Project Manager will be responsible for implementing the project and obtaining any necessary personnel or resources for the completion of the project. Specific duties will include:

- coordinating the activities of all subcontractors, to include informing them of the required PPE and insuring their signature acknowledging this Site Safety Plan.
- selecting a Site Safety Officer and field personnel for the work to be undertaken on site.
- ensuring that the tasks assigned are being completed as planned and on schedule.
- providing authority and resources to ensure that the Site Safety Officer is able to implement and manage safety procedures.
- preparing reports and recommendations about the project to clients and affected personnel.
- ensuring that all persons allowed to enter the site (i.e., EPA, contractors, state officials, visitors are made aware of the potential hazards associated with the substances known or suspected to be on site, and are knowledgeable as to the on-site copy of the specific site safety plan.
- ensuring that the Site Safety Officer is aware of all of the provisions of this site safety plan and is instructing all personnel on site about the safety practices and emergency procedures defined in the plan.
- ensuring that the Site Safety Officer is making an effort to monitor site safety, and has designated a Field Team Leader to assist with the responsibility when necessary.

### *8.8.2 Site Safety Officer*

The Site Safety Officer shall be responsible for the implementation of the site safety plan on site. Specific duties will include:

- monitoring the compliance of field personnel for the routine and proper use of the PPE that has been designated for each task.
- routinely inspecting PPE and clothing to ensure that it is in good condition and is being stored and maintained properly.
- stopping work on the site or changing work assignments or procedures if any operation threatens the health and safety of workers or the public.
- monitoring personnel who enter and exit the site and all controlled access points.
- reporting any signs of fatigue, work-related stress, or chemical exposures to the Project Manager.
- dismissing field personnel from the site if their actions or negligence endangers themselves, co-workers, or the public, and reporting the same to the Project Manager.
- reporting any accidents or violations of the site safety plan to the Project Manager and

documenting the same for the project in the records.

- knowing emergency procedures, evacuation routes, and the telephone numbers of the ambulance, local hospital, poison control center, fire and police departments.
- ensuring that all project-relating personnel have signed the personnel agreement and acknowledgments form contained in this site safety plan.
- coordinate upgrading and downgrading PPE as necessary due to changes in exposure levels, monitoring results, weather, and other site conditions.
- perform air monitoring with approved instruments in accordance with requirements stated in this Site Safety Plan.

*8.8.3 Project Field Manager*

In the event that the Project Manager and the Site Safety Officer are not on site, the Project Field Manger will assume all responsibility of the Site Safety Officer.

*8.8.4 Quality Assurance Officer Responsibilities*

The Quality Assurance Officer (QAO) is an employee of the same consulting firm generating the work plan and acts in conjunction with the project manager to develop a site-specific quality assurance plan. The QAO must not have another position on the project, such as a project or task manager, that involves project productivity or profitability as job-performance criteria.

The project QAO must have a minimum of a bachelor's degree in chemistry or natural science with a minimum of 20 hours in chemistry. The QAO must be proficient in analytical methodology, data interpretation and validation, the development of sampling plans, quality control procedures, and auditing techniques.

The QAO will assist the project manager in the development of the sampling and analytical portion of the Quality Assurance Project Plan. The QAO or his/her designee shall conduct periodic field and sampling audits, interface with the analytical laboratory to make requests and resolve problems, interface with the data validator and develop a project-specific data usability report. Because on-site work may be necessary, verification or completion of the 40-hour OSHA safety training course and 8-hour refresher is required.

*8.8.5 Field Personnel*

All field personnel shall be responsible for acting in compliance with all safety procedures outlined in the Site Safety Plan. Any hazardous work situations or procedures should be reported to the Site Safety Officer so that corrective steps can be taken.

# 9. Quality Assurance/Quality Control Protocol

The following sampling QA/QC protocol is in accordance with the United States Environmental Protection (USEPA) Agency's accepted sampling procedures for hazardous waste streams (Municipal Research Laboratory, 1980, *Sampling and Analysis Procedures for Hazardous Material Waste Streams*, Office of Emergency and Remedial Response, Cincinnati, Ohio. EPA-600/280-018) and The American Society of Testing and Material's (ASTM) sampling procedures.

## 9.1 Reporting of Results

All laboratory-reporting procedures will comply with the NYSDEC ASP and the New York State Department of Health Environmental Laboratory Approval Program (NYSDOH ELAP). In addition, all sample analyses will be done by a NYSDOH ELAP CLP certified laboratory and the data will be reported in the NYSDEC ASP Category B deliverables package format. The NYSDEC Department of Environmental Remediation (DER) Data Usability Summary Report (DUSR) will be used for data review. The data packages will be evaluated according to the DER DUSR Guidelines, Revised 9/97. Kevin Kleaka will author the DUSR.

## 9.2 Sampling Personnel

The activities associated with the remedial investigation plan will be performed by or under the auspices of a Quality Assurance Officer (Kevin Kleaka, see qualifications in Appendix E). The sample staff (samplers) will possess a minimum of a BA Degree in the Earth, Space or Biological Sciences or a BS Degree in Engineering. Samplers will have a minimum of one (1) year experience in environmental/geological fieldwork. Additionally, all samplers will have received mandatory forty-hour Occupational Safety and Health Administration (OSHA) training on working with potentially hazardous materials and appropriate Hazard Communication Program and "Right-To-Know" training.

The following table summarizes the approximate number of samples, field blanks, bottle type, EPA test method and preservatives for the proposed sampling plan.

| EPA Test Method | Media | Samples | Field | Bottle | Preservative |
|---|---|---|---|---|---|
| 8260 | soil | ~6 | NA | 40 ml VOA | 4 deg. C |
| 8270 | soil | ~6 | NA | 8 oz. Glass | 4 deg. C |
| 6010 | soil | ~6 | NA | 8 oz. Glass | none |
| 624 | gw | ~45 | ~5 | 40 ml VOA | 4 deg. C |

The laboratory will receive samples within 48 hours of sampling. One trip blank shall be submitted per pickup from laboratory personnel. The selected laboratory shall choose the matrix spike and duplicate samples. The following summarizes the verified tie of sample receipt (holding time) for the proposed sampling plan. The holding times follow the NYSDEC ASP 95 revision, Exhibit I.

USEPA Test Method 8260: 7 days
USEPA Test Method 8270BN: 5 days
USEPA Test Method 6010: 6 months
USEPA Test Method: 624: 7 days

## 9.3 Sampling Equipment

Separate QA/QC measures will be implemented for each of the instruments used in the performance of the SAP.

### *9.3.1 Geoprobe*

Prior to arrival on the Site and between sample locations, the probes will be decontaminated by steam cleaning, Alconox wash, and rinsing with distilled water. This will be followed by air drying as per project requirements. All sampling apparatus will be dedicated or disposable. A clean, new liner will be used for each sample. Parts will be inspected for wear and damage before each use.

### *9.3.2 Bailers*

In order to prevent contamination, all bailers will be dedicated and disposable.

### *9.3.3 Photo Ionization Detector*

Calibration of the PID will be conducted prior to sampling using a span gas of known concentration. The PID was a Photovac Micro-Tip, photo ionization detection meter.

### *9.3.4 Sample Vessels*

All sample vessels will be "level A" certified decontaminated containers supplied by a New York State Certified Commercial Laboratory. Samples analyzed for hydrocarbons will be placed in containers with Teflon lined caps. All samples will be preserved by cooling them to a temperature of approximately four degrees Celsius.

## 9.4 Sample Documentation

A sample represents physical evidence. An essential part of liability reduction is the proper control of gathered evidence. To establish proper control, proper sample identification and chain-of custody procedures will be followed as discussed below.

### *9.4.1 Sample Identification*

Sample identification will be executed by use of a sample tag, logbook and chain-of-custody form. Said documentation will provide the following information: 1) the project code; 2) the sample laboratory number; 3) the sample preservation; 4) the instrument used for source sample grabs; 5) the composite medium used for source sample grabs; 6) the date the sample was secured from the source media; 7) the time the sample was secured from the source media; and 8) the person who secured the sample from the source media.

### *9.4.2 Chain-of-Custody Procedures*

Due to the evidential nature of samples, possession will be traced from the time the samples are collected until they are received by the testing laboratory. A sample will be considered under custody if it: is in a person's possession; if is in a person's view after being in possession; is in a person's possession and they locked it up; or, it is in a designated secure area. When transferring custody, the individuals relinquishing and receiving the samples will sign, date and note the time on the Chain-of-Custody Form.

### *9.4.3 Laboratory-Custody Procedures*

A designated sample custodian will accept custody of the shipped samples and will verify that the information on the sample tags matches that on the Chain-of-Custody Records. Pertinent information as to shipment, pick-up, courier, etc., will be entered in the "remarks" section. The custodian will enter the sample tag data into a bound logbook.

The laboratory custodian will use the sample tag number, or assign a unique laboratory number to each sample tag, and assure that all samples will be transferred to the proper analyst or stored in the appropriate source area. The laboratory custodian will distribute samples to the appropriate analysts. Laboratory personnel will be responsible for the care and custody of samples, from the time they are received, until the sample is exhausted or returned to the sample custodian. All identifying data sheets and laboratory records will be retained as part of the permanent documentation. Samples received by the laboratory will be retained until after analysis and quality assurance checks are completed.

## 10. Community Health and Safety Plan

Due to the minimal ground disturbance that is anticipated during the sampling phase of the project, it is expected that only a small impact from generated dust could occur in the vicinity of the site. Well installation using the hollow stem auger, Geoprobe sampling, and GPR work can generate dust in small quantities. The ingress and egress of onsite vehicles can also create airborne dust.

To minimize the effects of dust on the community, sampling will only be performed on days that the local wind speeds (as measured by the National Weather Service at JFK Airport) are below 15 mph. All onsite vehicles will be required to travel at speeds no greater than 15 mph.

# Focussed Remedial Investigation

Site Survey Report
*November 20, 2000*

# 00-096

*Conducted at:*

**Site Code # 1-30-043U**
**36 Sylvester Street**
**Westbury, New York**

*Client:*

**Grand Machinery Exchange, Inc.**
**215 Centre Street**
**New York, New York**

*User:*

**New York State Department of Environmental Conservation**
**Bureau of Eastern Remedial Action**
**Division of Environmental Remediation**
**50 Wolf Road**
**Albany, New York**

IMPACT ENVIRONMENTAL

a division of impact environmental consulting, inc.

1 VILLAGE PLAZA, KINGS PARK, NEW YORK 11754 ❖ 631.269.8800 TELEPHONE ❖ 631.269.1599 FACSIMILE ❖ IMPACTENVIRONMENTAL.COM

# Focussed Remedial Investigation

Site Survey Report
*November 20, 2000*

# 00-096

*Conducted at:*

**Site Code # 1-30-043U**
**36 Sylvester Street**
**Westbury, New York**

*Client:*

**Grand Machinery Exchange, Inc.**
**215 Centre Street**
**New York, New York**

*User:*

**New York State Department of Environmental Conservation**
**Bureau of Eastern Remedial Action**
**Division of Environmental Remediation**
**50 Wolf Road**
**Albany, New York**

# TABLE OF CONTENTS



DISTRIBUTION LIST

| *Report Holder* | *Number of Reports Issued* |
|---|---|
| NYSDEC, Division of Environmental Remediation | 2 |
| Grand Machinery Exchange, Inc. | 1 |
| Impact Environmental Consulting, Inc. Corporate Records | 1 |

## 1. Purpose and Scope

This investigation was performed to identify the presence of any routes or mechanisms that would function through design or default to allow for the release or injection of hazardous substances to the subsurface of the property located at 36 Sylvester Street, Westbury, New York, herein identified as the Site. The Site has been designated by the New York State Department of Environmental Conservation as an Inactive Hazardous Waste Disposal Site, identified as Site Code Number 1-30-043U.

The investigative protocols used for this investigation were based upon the following documents; 1) the United States Environmental Protection Agency Compendium of Superfund Field Operations Methods; 2) the United States Environmental Protection Agency Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA; and 3) the Geophysical Survey Systems Inc. SIR System-2 Operation Manual. The activities performed under the scope of this investigation have been summarized in this report in the following sections.

- **Site Description**
- **Site Survey Plan**
- **Pollution Source Summary**
- **Site Investigation of Soil and Groundwater Quality**

Presented herein are the results of the Focussed Remedial Investigation, Site Survey conducted by Impact Environmental Consulting, Inc. on the Site [see **Plate 1:** Site Location Map, Westbury, New York].

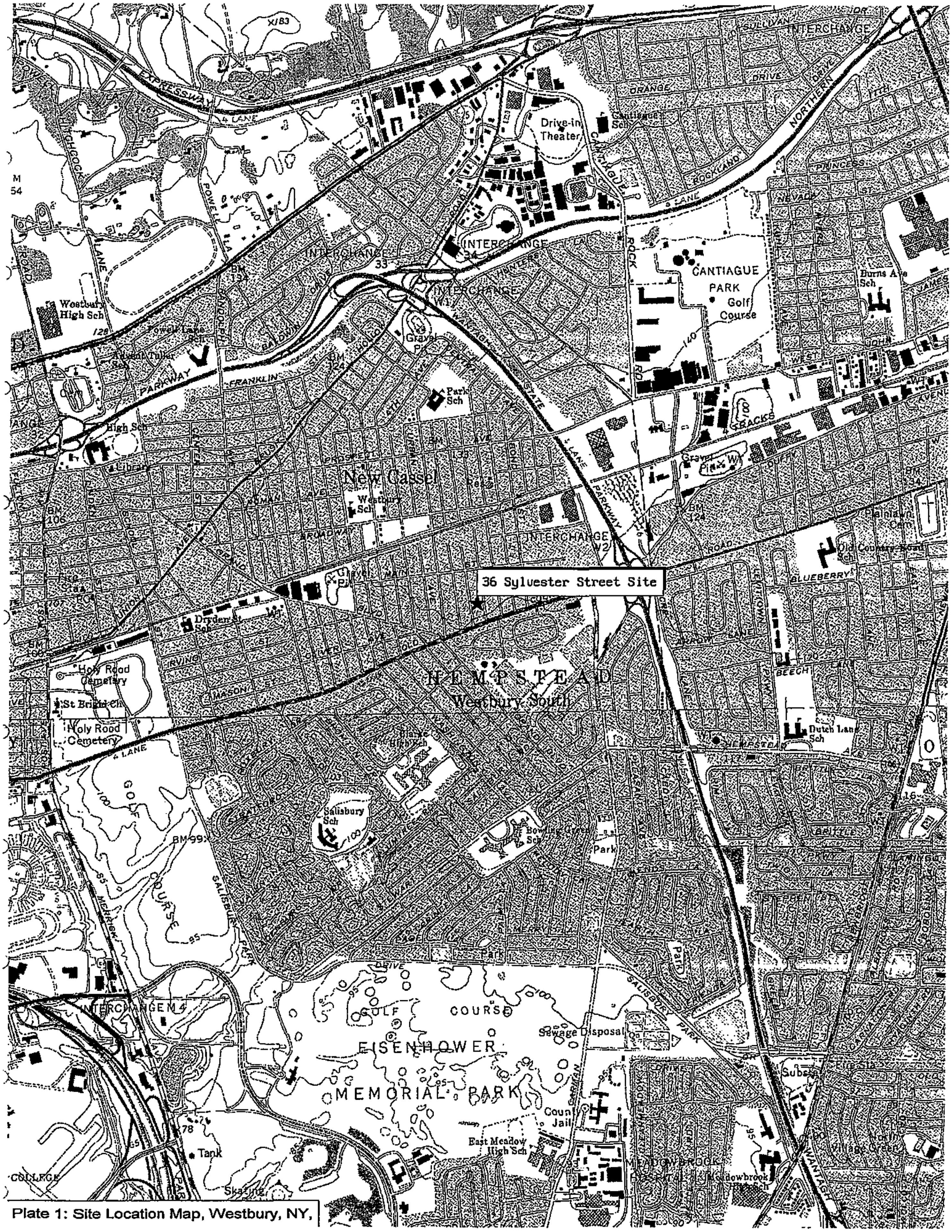



Plate 1: Site Location Map, Westbury, NY,

GMEI-00288

## 2. Site Description

### 2.1 Site Location and Topography

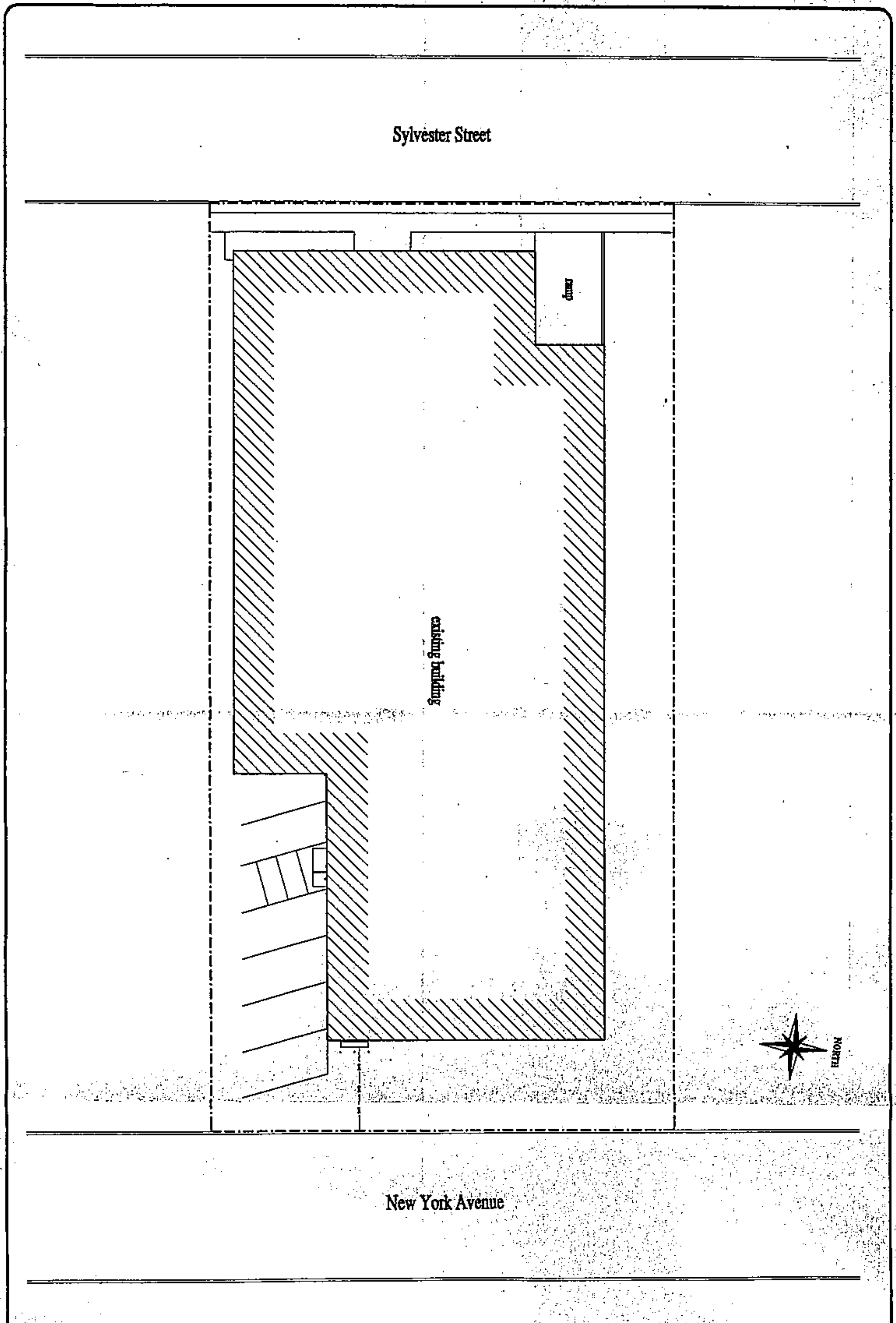
The Site is located at 36 Sylvester Street, Westbury, New York and is designated by the Nassau County Tax Assessors Office as Section 11, Block 77, Lots 21-24 and 56-59. This location is bordered by Sylvester Street to the west, New York Avenue to the east, and is situated between Main Street to the north and Old Country Road to the south. The areal extent of the Site is approximately 20,000 square feet. The Site contains one single-story, masonry building with a footprint of 12,125 square feet. The surface area of the Site consists of asphalt parking areas and concrete walkways. The Site exhibits low topographic relief (one to three percent slopes). Refer to **Plate 2:** Site Map, Westbury, New York.

### 2.2 Site History

A review of local government records under the freedom of information law was conducted to provide information regarding historic Site conditions (see **Appendix A:** Government Record Inventory). This review has revealed the following relevant information regarding the Site.

The Site was initially developed circa 1952 with a one-story, masonry building. The building was improved with an addition onto the eastern portion of the building in June 1953. The footprint of the building was constructed over a majority of the lot, with the exception of alleys on the north and south portions of the Site. The building was historically used for industrial applications that included the manufacturing of precision machinery. Former occupants of the Site included American Express Field Warehousing Corp., Universal Transistor Products Corp. and National Gear Products.

The building interior facilitated plumbing fixtures that included several bathroom sinks and toilets, a slop sink and floor drains. The building was heated with an oil-fired burner system that was installed as part of the original construction. Said system was fueled from exterior underground fuel oil storage tanks. Circa 1991, the oil-fired heating system was converted to a natural gas-fired heating system and the exterior underground fuel oil storage tanks were removed to the satisfaction of the Nassau County Health Department. The building was serviced by an on-site sanitary disposal system that consisted of a septic tank and one cesspool at the time of construction. The building was connected to the municipal sewer system in January 1987. On-site chemical storage associated with the operations of previous occupants included cutting and lubricating oils, mineral spirits and waste oils. Presently, the Site is operated by Gel-Tec, a division of Tishcon Corp. The interior of the building is primarily utilized as a warehouse unit by Gel-Tec.





IMPACT ENVIRONMENTAL

a division of Impact Environmental Consulting Inc.

1 Village Plaza
Kings Park, New York 11754
[illegible] TELEPHONE
[illegible] FACSIMILE


**00-096**

Plate 2: Site Map

*Westbury, New York*

Legend:
- groundwater probe node
- soil and groundwater probe node
- monitoring well

scale: 1" = 20'

## 3. Site Survey Plan

Site survey activities were conducted from August 14, 2000 to October 19, 2000. The activities conducted for the site survey included exterior and interior inspections, a remote sensing survey and a destructive survey to identify any potential pollution sources. A photographic log was compiled for the survey and can be referenced in **Appendix B:** Photographic Log. The following table provides the dates, project personnel and work tasks performed for the site survey aspect of the FRI.

| Date | Project Personnel | Site Survey Activity |
|---|---|---|
| August 14, 2000 | Jim Allen<br>Kevin Kleaka | Interior/Exterior Inspection |
| August 18, 2000 | Kevin Kleaka<br>Keith Franzen | Interior/Exterior Inspection |
| October 2 & 3, 2000 | Kevin Kleaka<br>Eric Krist | Remote Sensing Survey |
| October 16, 18 & 19, 2000 | Jim Allen<br>Kevin Kleaka | Destructive Survey |

### 3.1 Exterior Inspection

In general, the existing building was found to consist of a one-story, steel framed, masonry block building with a footprint of 12,125 square feet. The surface area of the Site consisted of asphalt parking/walkways (~34%), concrete walkways/pads (~5%), exposed soil (less than 1%) and the existing building (~60%). The main entrance of the building fronts on Sylvester Street (see **Photo 1**) and the warehouse portion of the building fronts on New York Avenue (see **Photo 2**). Two alleyways exist on the north and south side of the building (see **Photos 3 and 4**). A loading dock exists on the northwestern side of the building (see **Photo 4**). Said loading dock included a concrete ramp and retaining wall. No drainage structures were identified at the base of the loading ramp. A small parking area exists on the southeastern side of the building.

Natural gas service entered the building from the east side along New York Avenue. Electric service was overhead and entered the building from New York Avenue. Water service entered the building from the west side along Sylvester Street. All exterior roof drainage associated with the building appeared to be directed to grade. Two sanitary vents and one sanitary trap existed on the southeastern side of the existing building (see **Photo 5**). A PVC flex pipe (~1/2-inch diameter) was identified to protrude the southern exterior wall and connect with the sanitary vent (see **Photo 6**). Said pipe was not presently connected with any plumbing fixtures within the interior of the building.

Three pipes were noted to protrude through the southern exterior wall of the building (see **Photo 7**). Two of said pipes (~2" PVC and steel construction) were determined by visual observation to function as vents for interior bathrooms. The third pipe (~2" steel with elbow) was determined by visual observation to be associated with the sprinkler system within the building. A pipe of unknown function was identified at grade on the southern side of the building (see **Photo 8**).

A set of fill and vent pipes were noted to protrude through the southern and northern exterior wall of the building (see **Photo 9**). These fill and vent pipes were suspected to be associated with the former fuel oil USTs that were removed from the Site. A concrete pad was noted by the southeastern corner of the building. Said pad appeared to formerly facilitate electrical transformers. No chemical staining was noted on the surface of the pad or surrounding surface areas.

The exterior inspection of the Site identified the following features that warranted further investigation using remote sensing and/or destructive survey methods.

| Potential Pollution Source | Site-Specific Location | Photograph Reference |
|---|---|---|
| Sanitary vent pipes | Southeast side of building | Photo 5 |
| Pipe with unknown function at grade surface. | South side of building | Photo 8 |

Exterior Site features readily determined not to function as routes or mechanisms for the release or injection of hazardous substances to the Site included: vent pipes protruding through the southern wall of the building associated with bathroom plumbing, the stand pipe associated with sprinkler system, roof drainage pipes directed to grade and vent and fill pipes associated with abandoned fuel oil USTs.

## 3.2 Interior Inspection

The interior space occupied by Gel-Tec was primarily utilized as a warehouse for raw material storage associated with pharmaceutical manufacturing (see **Photo 10**). The interior of the building was not utilized for any manufacturing operations. In addition, the interior of the building was partitioned to include three bathrooms, a maintenance room, office space, a laboratory, a utility room and other vacant miscellaneous rooms. The laboratory was utilized for quality assurance purposes with respect to the raw materials stored at the warehouse (see **Photo 11**). General administrative office space was noted in the western portion of the building.

The floor of the interior of the building was constructed of a poured concrete slab. The concrete floor was inspected to identify any discontinuities that may represent evidence of former plumbing features and/or chemical storage tanks associated with prior interior operations. In addition, exposed plumbing features were also inspected to determine building effluent paths.

The interior inspection of the building identified the following features that warranted further investigation using remote sensing and/or destructive survey methods.

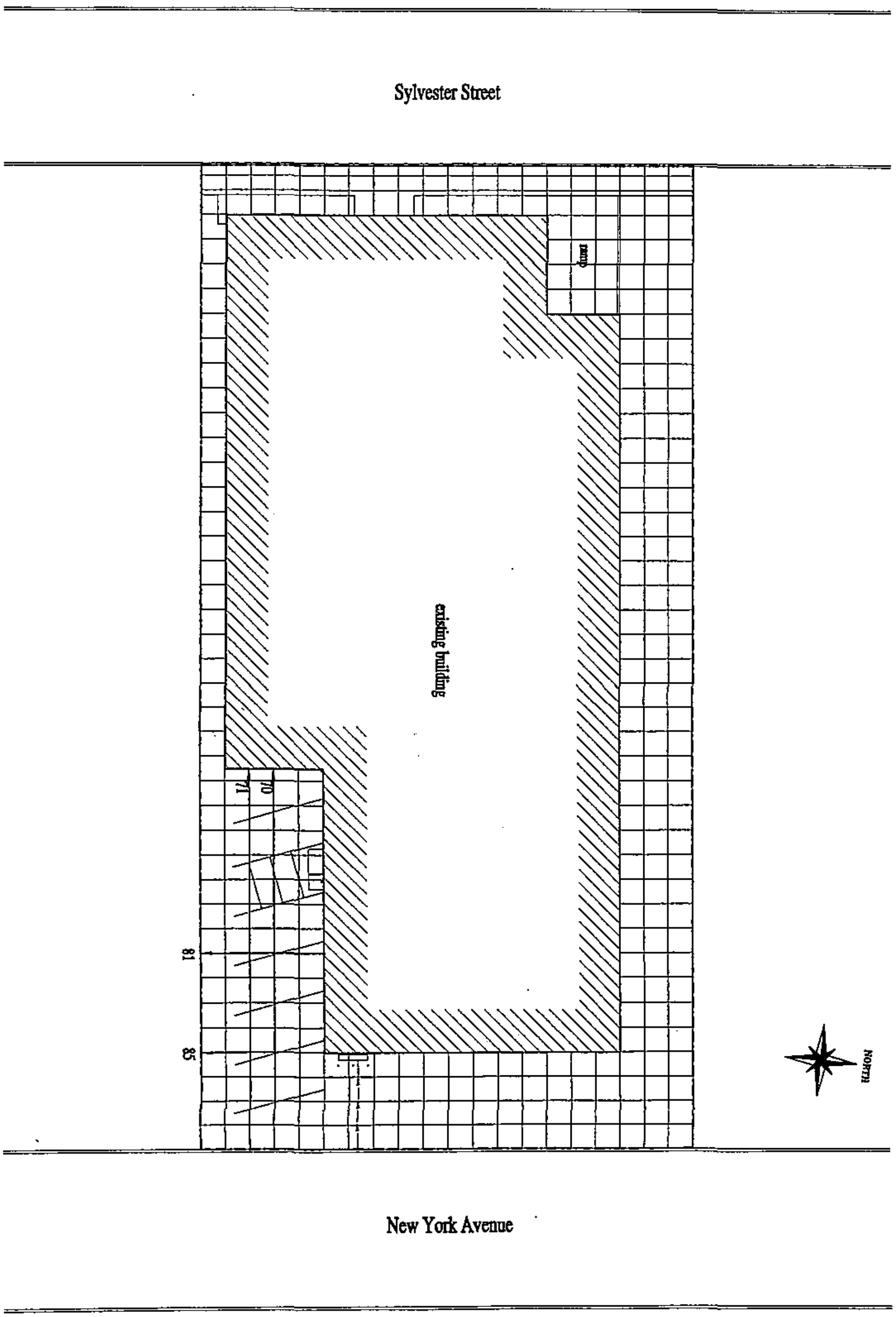
| Potential Pollution Source | Interior Location | Photograph Reference |
|---|---|---|
| Roof drainage pipe with capped port directed below grade | Western portion of building addition (Warehouse) | 12 |
| Concrete patch adjacent to roof drainage pipe | Western portion of building addition (Warehouse) | 12 |
| Floor Drains | Southeastern portion of building addition (Warehouse) | 13 and 14 |
| Concrete patch | Southeast portion of original building (Warehouse) | 15 |
| Roof drainage pipe with open port directed below grade | Southern portion of original building (Warehouse) | 16 |

Interior features and discontinuities determined not function as routes or mechanisms for the release or injection of hazardous substances included former equipment mounting brackets, electrical conduits and piping associated with a former air conditioning unit.

## 3.3 Remote Sensing Survey

A remote sensing survey was performed over the entire exterior surface of the Site to identify any subsurface structures that may represent point or non-point pollution sources. The survey was performed with a GSSI SIR System-2 ground penetrating radar (GPR) unit. A coordinate system consisting of five-foot intervals (north-south and east-west) was established on the planimetric surface of the Site. One GPR scan per grid transect was acquired for interpretive field analysis. Each GPR scan was designated with a coordinate number corresponding to the scanning location and direction. All GPR scans and coordinate numbers were mapped onto the Site map as presented in **Plate 3:** GPR Survey Map, Westbury, New York.

An analysis of the data acquired from the survey detected two significant subsurface dielectric anomalies representative of potential pollution sources. The coordinate reference number, GPR generated imagery and corresponding interpretive analysis obtained from said anomalies are presented as follows.




IMPACT ENVIRONMENTAL
IMPACT ENVIRONMENTAL

*a division of Impact Environmental Consulting Inc.*

1 VILLAGE PLAZA
KINGS PARK, NEW YORK 11754
[illegible] TELEPHONE
[illegible] FACSIMILE

# 00-096

Plate 3: GPR Survey Map

*Westbury, New York*

Legend:

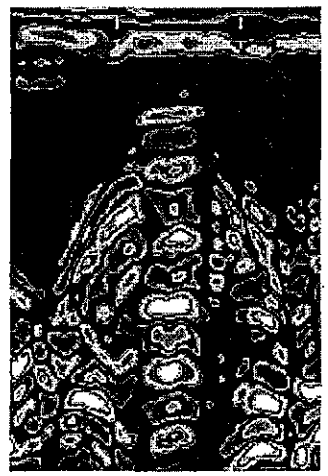
- groundwater probe node
- soil and groundwater probe node
- monitoring well

scale: 1" = 20'

GMEI-00294

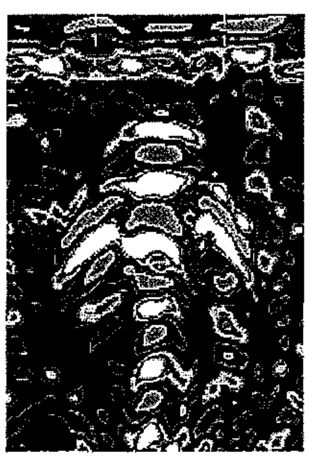
File 81: 70

The subsurface patterns identified in this GPR image were consistent with the size and shape of a concrete dome associated with an underground injection well. Based on the location of this detected anomaly, it was suspected that this subsurface feature may represent a sanitary cesspool.



File 85: 71

The subsurface patterns identified in this GPR image were consistent with the size and shape of a concrete dome associated with an underground injection well. Based on the location of this detected anomaly, it was suspected that this subsurface feature may represent a sanitary cesspool.



The Site remote sensing survey identified the following subsurface dielectric anomalies that warranted further investigation using destructive survey methods.

| Potential Pollution Source | Exterior Location | GPR Coordinate Reference |
|---|---|---|
| Detected anomaly interpreted as UIW | Southeastern portion of Site | 81: 71 |
| Detected anomalies interpreted as UIW | Southeastern portion of Site | 85 : 71 |

The balance of the GPR scans failed to detect the presence of any additional significant subsurface dielectric anomalies interpreted as potential pollution sources.

## 3.4 Destructive Survey

A destructive survey was performed with regards to specific Site features identified from the Site inspection and remote sensing survey that warranted further investigation. The destructive survey was performed to generate additional information concerning the structure and function of these features to determine migration paths and outfall locations of any potential Site pollution sources. The work tasks associated with the destructive survey utilized equipment and/or techniques that included backhoes, manual excavating tools, masonry saws, jack hammers, dye tracing flow studies, plumbing snakes, electromagnetic finders and subsurface pilot probes to access and/or investigate each of the Site features. The Site features that were subjected to destructive investigation were as follows.

| Potential Pollution Source | Site-Specific Location | Investigative Method | Photo Reference. |
|---|---|---|---|
| Detected anomalies interpreted as UIWs (sanitary cesspools) | Southeastern portion of Site | Direct sensing probes/excavation/flow study | Photos 17, 18 and 19 |
| Pipe with unknown function at grade surface. | South side of building | Transmitter snake, electromagnetic finder | Photo 20 |
| Roof drainage pipe with capped port directed below grade | Western portion of building addition (Warehouse) | Excavation/flow study | Photo 12 |
| Concrete patch adjacent to roof drainage pipe | Western portion of building addition (Warehouse) | Excavation/flow study | Photo 12 |
| Floor Drains | Southeastern portion of building addition (Warehouse) | Excavation/flow study | Photo 21, 22 and 23 |
| Concrete patch | Southeast portion of original building (Warehouse) | Excavation | Photo 24 |
| Roof drainage pipe with open port directed below grade | Southern portion of original building (Warehouse) | Flow study | Photo 16 |

With respect to the detected anomalies identified on the southeastern exterior portion of the Site, installation of several direct sensing probes was conducted to identify the presence of any subsurface structures (i.e. the pre-cast walls and domes). Said probes confirmed the presence of two subsurface structures. Accordingly, excavation activities were conducted to expose the subsurface structures. The excavation revealed the presence of two abandoned underground injection wells (cesspools) associated with the former on-site sanitary disposal system. Said UIWs had not been backfilled. These UIWs were observed during all dye tracing activities referenced below. None of the dye tracing activities detected any evidence that indicated interior plumbing features were actively connected with these UIWs. Furthermore, a septic tank was not suspected as being present based on the close proximity and direction of subsurface piping within the primary UIW in reference to the sanitary trap. Although, the site plans at the time of construction depicted a septic tank and one cesspool, it was expected that the septic tank was never installed and an additional cesspool was utilized in lieu of the septic tank. As such, the UIWs were identified as point-pollution sources.

With respect to the pipe of unknown function at grade on the southern side of the building, a transmitter snake was inserted within the confines of said pipe and traced. The transmitter signal was traced toward the interior of the building with an electomagnetic finder. Based on the detection of the transmitter signal within the building, it was determined that the pipe was associated with a former interior air conditioning unit. No liquid or chemical odor was detected on the snake. As such, this feature was not identified as a pollution source.

With respect to the interior roof drainage pipe with capped ports in the western portion of the warehouse, a dye tracing flow study was conducted to determine the outfall location of said pipe. The results of said flow study determined that the pipe was connected with the exterior trap, which is connected with the municipal sewer system. As such, said drainage pipe and outfall location were not identified as pollution sources. With respect to the concrete patch adjacent to the roof drainage pipe with capped ports in the western portion of the warehouse, excavation activities were conducted to identify any subsurface structures. The excavation of this feature identified a pipe below grade that was capped. This pipe was suspected to be associated with a former slop sink. Further, it was determined that this capped below grade pipe was connected with the adjacent roof drainage pipe below grade. As such, said below grade pipe and outfall location were not identified as pollution sources.

With respect to the floor drains identified in southeastern portion of the warehouse, excavation activities were conducted to expose the associated plumbing beneath the drains (drains were clogged) to facilitate a dye tracing flow study. Each drain trap was identified to contain an oily substance similar to that of cutting lubrication oil. The results of said flow study determined that the pipes were connected with the exterior trap, which is connected with the municipal sewer system. As such, said floor drains and outfall location were not identified as pollution sources.

With respect to the concrete patch identified in southeastern portion of the warehouse, excavation activities were conducted to identify the presence of any subsurface structures. The excavation revealed below grade pipes. Said pipes were exposed to facilitate a dye tracing flow study. The results of said flow study determined that the pipes were connected with the exterior trap, which is connected with the municipal sewer system. As such, said below grade pipes and outfall location were not identified as pollution sources.

With respect to the interior roof drainage pipe with open ports in the southern portion of the warehouse, a dye tracing flow study was conducted to determine the outfall location of said pipe. The results of said flow study determined that the pipe was connected with the exterior trap, which is connected with the municipal sewer system. As such, said drainage pipe and outfall location were not identified as pollution sources.

## 4. Pollution Source Summary

The performance of the Site survey that included an exterior inspection, interior inspection, remote sensing survey and destructive survey confirmed the presence of two point pollution sources. These point pollution sources were identified as abandoned underground injection wells associated with the former on-site sanitary disposal system. These pollution sources will be the focus of the design and implementation of the Site investigation.

# 5. Site Investigation of Soil and Groundwater Quality

## 5.1 Investigation of Subsurface Soil Quality

The investigation of subsurface soil will be performed with respect to the site point pollution sources identified from the site survey. The investigative procedures will conform to the protocols established in the Final FRI Work Plan. The sample acquisition plan was slightly modified to incorporate data obtained from the Site survey. The sampling plan for the point pollution sources will be implemented as follows.

One soil probe node will be sited within the confines of each UIW identified on the southeastern portion of the Site. Three subsurface soil samples will be secured from said soil probe nodes at three discrete depth intervals. One soil sample representative of the invert of each UIW structure will be secured for analysis. The second soil sample will be secured at a depth interval of thirty (30) to thirty-two (32) feet below existing grade (BEG). The third soil sample will be secured at a depth interval of ten (10) feet above the groundwater table (i.e. if the groundwater is at 55' BEG, the sample will be acquired from 43'-45'ft.). All soil sampling locations can be referenced with **Plate 4:** Sample Acquisition Plan, Westbury, New York.

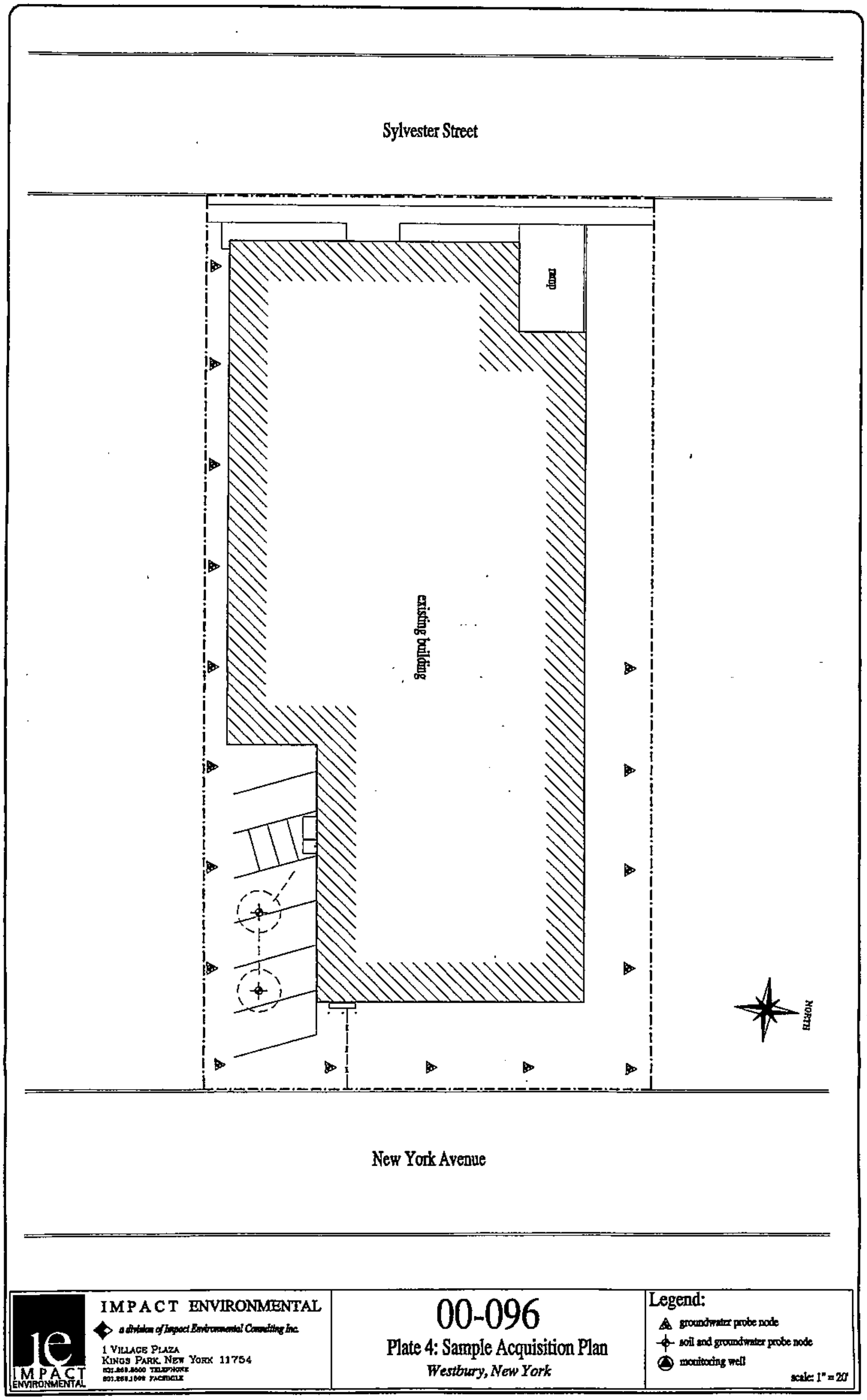
The laboratory analysis of the soil samples obtained from the investigation will be consistent with the specifications outlined in the Final FRI Work Plan.

## 5.2 Investigation of Groundwater Quality

The investigation of Site groundwater quality will be performed with respect to the confirmed point pollution sources in comparison with hydraulically up-gradient and down-gradient groundwater quality. In addition, the Site groundwater quality data will be compared with historical groundwater quality data.

Nineteen (19) groundwater sampling locations will be sited on the Site. The groundwater sampling locations will be acquired from temporary groundwater monitoring wells. One temporary groundwater monitoring well will be sited either from within or adjacent to each UIW on the southeastern portion of the Site. The balance of the temporary groundwater monitoring wells will be sited in accordance with the Final FRI Work Plan. All groundwater sampling locations can be referenced with **Plate 4:** Sample Acquisition Plan, Westbury, New York.

Three (3) water samples obtained at three separate depths will be secured from each temporary groundwater monitoring well. Geoprobe groundwater sampling (temporary wells) depths will be based on actual groundwater depth measurements at the site. The presumed sampling depths will be in intervals representative of 55'-65', 66'-75'


Sylvester Street
ramp
existing building
NORTH
New York Avenue
IMPACT ENVIRONMENTAL
a division of Impact Environmental Consulting Inc.
1 Village Plaza
Kings Park, New York 11754
00-096
Plate 4: Sample Acquisition Plan
Westbury, New York
Legend:
groundwater probe node
soil and groundwater probe node
monitoring well
scale: 1" = 20'

GMEI-00301

and 76'-85'below existing grade. If a significant difference in the presumed groundwater depth and actual groundwater depth is identified, any changes to groundwater sampling depth will be approved before installation. The laboratory analysis of the groundwater samples obtained from the investigation will be consistent with the specifications outlined in the Final FRI Work Plan.

Subsequent to obtaining groundwater quality data from the temporary groundwater monitoring wells, three permanent groundwater monitoring wells will be installed on the Site. The selected location of these monitoring wells will utilized to graphically define Site specific groundwater flow direction. In addition, the wells will be sited relative to any detected groundwater contamination presumed to be associated with confirmed pollution sources on the Site. The selected location of these wells will be approved by the NYSDEC before installation.

**IMPACT ENVIRONMENTAL CONSULTING, INC.**

Richard S. Parrish, *P.G.*
*Project Manager*

Kevin Kleaka
*Quality Assurance Officer*

# APPENDIX A:
## Government Record Inventory

*Site Code # 1-30-043U*
*36 Sylvester Street*
*Westbury, New York*

THOMAS S. GULOTTA
COUNTY EXECUTIVE

KATHLEEN A. GAFFNEY, M.D., M.P.H.
COMMISSIONER

3/23/00
Re: Commercial Building
36 Sylvester Street
New Cassel, N.Y.

COUNTY OF NASSAU
DEPARTMENT OF HEALTH
240 OLD COUNTRY ROAD
MINEOLA, N.Y. 11501-4250

Dear Ms. Ziembicki:

Your request for access to records of the Department of Health has been approved. Records will be made available during normal working hours at 240 Old Country Road, Mineola, and there will be a 25¢ per page fee for photo copying any Nassau County Records. (***NOTE: Responses to Lead FOIL requests are handled separately.***)

The Nassau County Department of Health shall not be responsible for inaccuracies in electronic information due to programming and/or clerical error.

Listed below are the Bureau(s) which have searched their files for records pertaining to your request. Please call the Bureau(s) checked below and speak to the contact person before arriving to see the records:

| | BUREAU(S) | CONTACT PERSON | |
|---|---|---|---|
| ☒ | **ENVIRONMENTAL MANAGEMENT AND/OR ENGINEERING**<br>Petroleum & Chemical Tanks & Bulk Storage, Including Spills & Leaks; Medical Waste; Solid Waste; Air Emission Permits; Road Salt Storage; Underground Injection Control (dry cleaners only) | Mr. Silvers | 571-2404 |
| ☐ | **ENVIRONMENTAL INVESTIGATION AND ASSESSMENT**<br>Environmental Investigations and Complaints Including Odors; Asbestos; Tobacco Smoking | Mr. Gaige | 571-3232 |
| ☐ | **WATER SUPPLY PROTECTION**<br>Drinking Water; Private Wells; Groundwater Quality; Backflow Prevention Devices; Bottled Water; Realty Subdivisions Private Sewage Disposal; Sewer Extensions; Sewer Connections; Underground Injection Control(except dry cleaners) | Mr. Irwin | 571-3323 |
| | **ENVIRONMENTAL SANITATION** | | |
| ☐ | Food Protection. | Mr. Lynch | 571-3680 |
| ☐ | Summer Camps; Temporary Residences; Bathing Facilities. | Mr. Jacobs | 571-3680 |
| ☐ | Housing; Rodent Control; Heat; General Nuisance. | Mr. Putnam | 571-2328 |
| ☐ | Radiological Health. | Mr. Walderman | 571-3313 |

☐ ***No Records Noted***

Yours truly,

Nola Sanchez

Nola Sanchez
(516) 571-3571

h:\ead\share\foil\foilltr.doc

# 8041

GMEI-00304

NASSAU COUNTY DEPARTMENT OF HEALTH    NASSAU COUNTY PUBLIC HEALTH ORDINANCE ARTICLE XI
APPLICATION FOR A TOXIC OR HAZARDOUS MATERIALS STORAGE FACILITY PERMIT
FORM 1 - GENERAL INFORMATION
SEE INSTRUCTION SHEET

(INH) Industrial 1/10/13

RECEIVED
JAN 14 1987
N.C.D.H. - B.W.P.C.

For Office Use Only
Facility I.D. 54007
☐ Municipal
☒ Non-Municipal

Check all that apply to your facility: ☒ Tank Storage ☒ Container Storage ☐ Bulk Storage ☐ Storage of Road De-icing Materials

Reason for submitting application: ☒ New ☑ Renewal ☐ Change ☐ Construction

| Facility Name | Street Address | Village | State | Zip | Phone |
|---|---|---|---|---|---|
| NATIONAL GEAR PRODS, INC. | 36 SYLVESTER ST. | WESTBURY | N.Y. | 11590 | 516 997-530 |

| Facility Mailing Address (If different from above) | Facility Contact Person (Name & Title) | Phone |
|---|---|---|
| SAME | VITO E. INSINGA VICE-PRES. | SAME |

| | Street Address | Village | State | Zip | Phone |
|---|---|---|---|---|---|
| Facility Owner: SAME | | | | | |
| Property Owner (If not Facility Owner): GRAND MACHINERY | 215 CENTRE ST. | N.Y.C. | N.Y. | 10013 | 212 226-5356 |
| Tank Owner (If not Facility Owner): GRAND MACHINERY | 215 CENTRE ST. | N.Y.C. | N.Y. | 10013 | 212 226-5356 |

Name that should appear on Permit (Permittee)
(If different from Facility Owner) SAME

| Permittee's Street Address | Village | State | Zip | Phone |
|---|---|---|---|---|
| | | | | |

Permittee's Relationship to Facility Owner: ☑ Same ☐ Operator of Facility ☐ Other (Specify):

| Principal Property Tax Code: | School District No. | Section | Block | Lot |
|---|---|---|---|---|
| | | 11 | 77 | 21-24 + 56-59 |

Forms Attached (Check all that apply) ☑ Form 2 - Tank Registration ☑ Form 3 - Bulk & Container Storage Registration ☐ Form 4 - Storage of Road De-icing Materials

I hereby affirm under penalty of perjury that the information provided on this form and on any attached forms, statements and exhibits is true to the best of my knowledge and belief.

| Print Name | Signature | Title | Date |
|---|---|---|---|

GMEI-00305

NASSAU COUNTY DEPARTMENT OF HEALTH
APPLICATION FOR A TOXIC OR HAZARDOUS MATERIALS STORAGE FACILITY PERMIT
FORM 2 - TANK REGISTRATION
SEE INSTRUCTION SHEETS

RECEIVED

For Office Use Only

Date Application Received JAN 14 1987

Facility I.D 54007

Reviewed By N.C.D.H. - B.W.P.C.

Date Reviewed 1/14/87

Action: ☑ Approved ☐ Not Req'd. ☐ Disapproved

No. of Months 48

Facility Name NATIONAL GEAR PRODS. INC.

Facility Address 36 SYLVESTER ST. WESTBURY, N.Y.

| Action | Tank Number | Location | Design Capacity (Gallons) | Material of Construction | Internal Protection | External Protection | Piping | Type | Material Currently or Last Stored: NCDH Number | Material Currently or Last Stored: Name | Status | Tank Installation Date (Month/yr) | Leak Detection Sys. | Secondary Containment | Product Gauge | Dispenser Method | Fill | Additional Information for Abandoned Tanks: Date Last Used (Month/yr) | Additional Information for Abandoned Tanks: Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 4 | 1000 | 1 | 2 | 2 | 1 | 1 | 64721 | #2 FUEL OIL | 1 | 0457 APR. 1957 | 5 | 5 | 1 | 1 | 1 | | |
| | 2 | 4 | 1000 | 1 | 2 | 2 | 1 | 1 | 64721 | #2 FUEL OIL | 1 | 0457 APR. 1957 | 5 | 5 | 1 | 1 | 1 | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

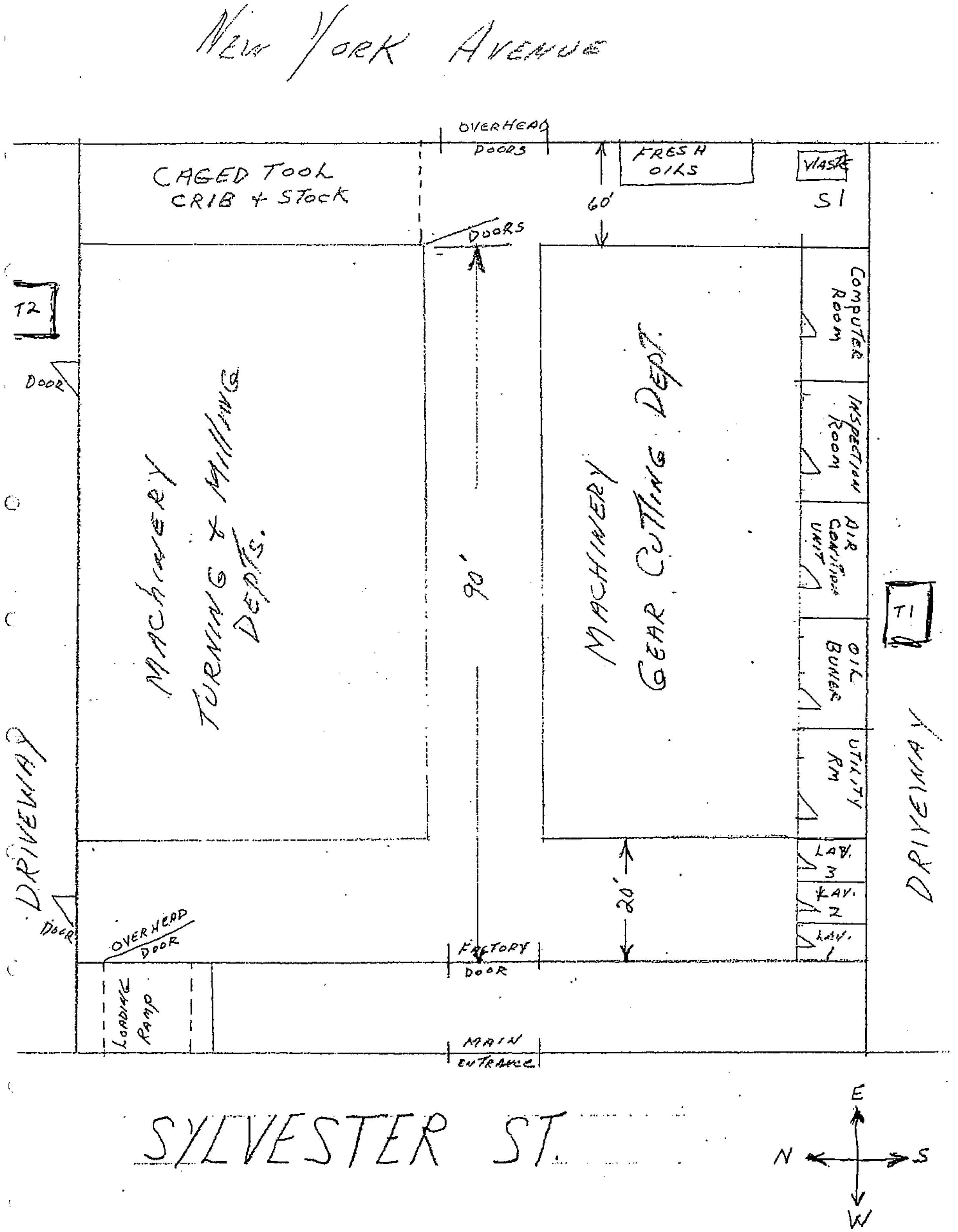
EH 858 4/86

Date Submitted 1-13-87

Page 1 of 1

☐ D.P.

GMEI-00306



NEW YORK AVENUE
OVERHEAD DOORS
CAGED TOOL CRIB + STOCK
FRESH OILS
WASTE
S1
60'
DOORS
T2
DOOR
COMPUTER ROOM
INSPECTION ROOM
AIR CONDITIONING UNIT
OIL BURNER
UTILITY RM
LAV. 3
LAV. 2
LAV. 1
MACHINERY TURNING & MILLING DEPTS.
MACHINERY GEAR CUTTING DEPT.
90'
20'
T1
DRIVEWAY
DRIVEWAY
DOOR
OVERHEAD DOOR
FACTORY DOOR
LOADING RAMP
MAIN ENTRANCE
SYLVESTER ST.
E
N
S
W


GMEI-00307

NASSAU COUNTY DEPARTMENT OF HEALTH
APPLICATION FOR A TOXIC OR HAZARDOUS MATERIALS STORAGE FACILITY PERMIT
FORM 3 - BULK AND CONTAINER STORAGE REGISTRATION
SEE INSTRUCTION SHEETS

| | |
|---|---|
| Date Application Received: RECEIVED JAN 14 1987 | Facility I.D. 54007 |
| Reviewed By: N.C.D.H. - B.W.P.C. | Date Reviewed 1/14/87 |
| Action: ☒ Approved ☐ Not Req'd. ☐ Disapproved | No. of Months 48 |

Facility Name: NATIONAL GEAR PRODS. INC.

Facility Address: 36 SYLVESTER ST. WESTBURY, N.Y. 11590

Action: ☒ Register Existing Area ☐ Add Area ☐ Remove Area ☐ Modify Area Area No. 51

Location: ☒ Indoors ☐ Outdoors | Bulk Storage Max.Quantity Stored: | Container Storage Max.No. 17 DRS. Max.Vol. 880 GAL.

Secondary Containment: ☐ Impervious Berm/Dike ☒ Impervious Floor/Pad ☐ Roof ☒ Walls ☐ Floor Drain & Storage Tank ☒ None ☐ Other (Specify):

Construction Material of Dike & Pad (Check all that Apply): ☒ Concrete ☐ Steel ☐ Other (Specify): | Security ☒ Yes ☐ No

| Type | NCDH Number | Material Name | Physical State | Amount Stored: Average Quantity | Amount Stored: Units | Storage Method: Average Number | Storage Method: Type |
|---|---|---|---|---|---|---|---|
| | 06451 | CUTTING + LUBRICATING OILS | 1 | 400 | 1 | 11 | 1 |
| | 5811 | MINERAL SPIRITS (BLACOTHANE) | 1 | 50 | 1 | 2 | 1 |
| | 9671 | WASTE OILS + MINERAL SPIRITS (BLACOTHANE) | 1 | 150 | 1 | 4 | 1 |
| | | | | | | | |

GMEI-00308

STORAGE FACILITY PERMIT
DIVISION OF ENVIRONMENTAL HEALTH
NASSAU COUNTY DEPARTMENT OF HEALTH

02/01/91 24

NEW YORK STATE
TAX EXEMPT?
MUNICIPALITY
( ) YES ( ) NO
IF YES, INDICATE
TAX EXEMPT NUMBER
AND ENCLOSE COPY
OF CERTIFICATE
(FORM ST-119.1)
CERTIFICATE
NUMBER:

FACILITY ID NUMBER : 054007

APPLICATION DUE : 04/01/91

RECEIVED

FEB 14 1991

NCDH—BLRM

NATIONAL GEAR PRODS. INC.
36 SYLVESTER STREET
WESTBURY NY 11590

| FACILITY NAME | STREET ADDRESS | FACILITY PHONE |
|---|---|---|
| NATIONAL GEAR PRODS. INC.<br>WESTBURY NY 11590 | 36 SYLVESTER STREET | 516-997-5300 |
| **CONTACT PERSON** | **CONTACT TITLE** | **CONTACT PHONE** |
| VITO E. INSINGA | | 516-997-5300 |
| **FACILITY OWNER** | **STREET ADDRES** | **OWNER PHONE** |
| NATIONAL GEAR PRODS. INC.<br>WESTBURY NY 11590 | 36 SYLVESTER STREET | 516-997-5300 |
| **PROPERTY OWNER** | **STREET ADDRESS** | **PROPERTY PHONE** |
| GRAND MACHINERY<br>NEW YORK CITY NY 10013 | 215 CENTER STREET | 212-226-5356 |
| **PERMITTEE NAME** | **STREET ADDRESS** | **PERMITTEE PHONE** |
| NATIONAL GEAR PRODS. INC.<br>WESTBURY NY 11590 | 36 SYLVESTER STREET | 516-997-5300 |

PERMITTEE"S RELATIONSHIP TO FACILITY OWNER X SAME OPERATOR OF FACILITY OTHER SPECIFY

| TANK/STORAGE | | CAPACITY | STATUS | LOCATION | TYPE OF MATERIAL STORED |
|---|---|---|---|---|---|
| 0001 | TANK | 1000 | INSERVC | INBELOWG | OIL, FUEL #2 |
| 0002 | TANK | 1000 | INSERVC | INBELOWG | OIL, FUEL #2 |
| 0001 | BULK | 880 | INSERVC | INBELOWG | MULTIPLE CHEMICALS STORED IN BULK ARE |

IF THERE IS ANY TANK(S) OR STORAGE AREA(S), AT YOUR FACILITY WHICH ARE NOT LISTED ABOVE PLEASE PROVIDE US WITH THE FOLLOWING INFORMATION ABOUT EACH TANK OR AREA: CAPACITY, LOCATION, TYPE OF MATERIAL STORED IN THE TANK OR AREA, AND THE STATUS OF THE TANK OR AREA.

I HEREBY AFFIRM UNDER PENALTY OF PERJURY, THAT ALL THE INFORMATION PROVIDED ON THIS FORM AND ON ANY ATTACHED FORMS, STATEMENTS AND EXHIBITS IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

| PRINT NAME | SIGNATURE | TITLE | DATE |
|---|---|---|---|
| Vito E. Insinga | V. E. Insinga | Vice-Pres. | 2-13-90 |

THOMAS S. GULOTTA
COUNTY EXECUTIVE

GEORGE PICKETT, M.D., M.P.H.
COMMISSIONER

NASSAU COUNTY
DEPARTMENT OF HEALTH
240 OLD COUNTRY ROAD
MINEOLA, N.Y. 11501-4250

October 8, 1991

Gerry Goodman
Grand Machinery
215 Centre Street
New York, N.Y. 10013

Re: National Gear
36 Sylvester Street
Westbury, N.Y.
Facility # 54007

Dear Mr. Goodman:

This notice is to inform you that the following tanks at the above facility are in violation of Article XI of the Nassau County Public Health Ordinance:

| Tank # | Tank Size (gal) | Contents | Test Due | Removal Due |
|---|---|---|---|---|
| 1 | 1,000 | #2 Fuel Oil | 7/30/88 | 8/1/93 |
| 2 | 1,000 | #2 Fuel Oil | 7/30/88 | 8/1/93 |

Please arrange to have these tanks tested within the next 30 days.

Failure to bring this facility into compliance could result in fines up to $500 per day per violation.

If you have any questions please contact this department at (516) 535-3315.

Sincerely,

Robin Rhode

Robin Rhode
Bureau of Land Resources Management

RR:sb
#3771K

GMEI-00310

THOMAS S. GULOTTA
COUNTY EXECUTIVE

GEORGE PICKETT, M.D., M.P.H.
COMMISSIONER

NASSAU COUNTY
DEPARTMENT OF HEALTH
240 OLD COUNTRY ROAD
MINEOLA, N.Y. 11501-4250

DECEMBER 01, 1991

NATIONAL GEAR PRODS. INC.
GERRY GOODMAN
215 CENTRE ST.
NEW YORK CITY NY 10013

FACILITY ID: 054007
FACILITY ADDR: 36 SYLVESTER STREET
FACILITY CITY: WESTBURY
RE: UNDERGROUND TANK TESTING FAILURE

DEAR GERRY GOODMAN

ON 11-08-91 YOU NOTIFIED THIS OFFICE THAT THE FOLLOWING TANK(S) FAILED A TIGHTNESS TEST:

| TANK | DATE TESTED |
|---|---|
| 0002 | 11-08-91 |

NASSAU COUNTY PUBLIC HEALTH ORDINANCE ARTICLE XI SECTIONS 9,A,10 AND 9,A,11 REQUIRES THAT A TANK FOUND TO BE LEAKING BE IMMEDIATELY EMPTIED OF ALL CONTENTS AND REMOVED FROM SERVICE UNLESS WRITTEN APPROVAL IS GRANTED BY THE DEPARTMENT TO DO OTHERWISE. PLEASE CONTACT THIS DEPARTMENT AT 535-2406 TO DISCUSS WHAT ACTIONS YOU MUST TAKE REGARDING THIS(THESE) TANK(S).

VERY TRULY YOURS,

THOMAS R. NORRIS
BUREAU OF LAND RESOURCES MANAGEMEN

This tank is being removed 12/9/91.
Removal #343491R01

GMEI-00311

Field Investigation
Article XI Facility
Nassau County Department of Health

- [ ] Initial System Test
- [x] Tank Removal
- [ ] Tank Only
- [ ] Installation
- [ ] System Retest
- [ ] Periodic Year:
- [ ] New Installation
- [ ] Abandonment

Date of Job 12/9/91 Time ____
Date Received 12/2/91 Time ____
Contractor G.U.
Telephone # 343-8989

Facility ID# - 54007
Confirmation# 343H91R01
Spill# 9108583

Establishment Name National Gear Co.
Address 36 Sylvester St.
Town Westbury
Telephone # ____
Cross Street: ____
No. of Tanks 2
Type of Test ____

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Tank # | | | | | | | |
| System Test | | | | | | | |
| Tank Test | | | | | | | |
| Size | | | | | | | |
| Product | | | | | | | |
| Leak Rate | | | | | | | |
| Pass/Fail | | | | | | | |
| Fee | | | | | | | |
| Fee Paid | | | | | | | |
| Retest Needed | | | | | | | |

Tank Removal

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Tank # | 1 | 2 | | | | | |
| Visible Hole | No | No | | | | | |
| # Holes | #2F.O. | #2F.O. | | | | | |
| Size | 1,000 | 1,000 | | | | | |
| Location | — | — | | | | | |
| Photo | No | No | | | | | |

Excavation: ✓ Clean ✓ Contaminated Soil __ Free floating oil

Soil Removed (Y/N) N Amount ____

Installation: Tank size ____ Approved plans __ Yes __ No

Notes:
12/10 DEC attended; per Kevin Kispert: no holes in either tank. No contamination detected in excavations. AB

Inspector Alan Brunner Supervisor ____

Employee Number 114 Date 12.10.91

- [ ] Continued on Reverse Side
- [x] Computer Entry
- [x] Data Book Entry

1 - Piping 2 - Tank
3 - Fitting 4 - Other

EH907 6/91

GMEI-00312

# NASSAU COUNTY
# DEPARTMENT OF HEALTH

PD $100.00
DB
CE

## TEST DATA SHEET

NAT. GEAR

- [x] INITIAL SYSTEM TEST
- [ ] TANK ONLY TEST
- [ ] SYSTEM RE-TEST
- [ ] NEW INSTALLATION TEST

Facility I.D. Nr. 6 54007

Confirmation Nr. 309 H91T01 312H91T06

Date of Job 11/5 11/8/91

Tank Nr. #1 #2

Product FO FO

RESULTS: #1 PASSED / #2 FAILED

Leak Rate .043 / .255

D.E.C. Spill Nr. ______

ed by the

PN682

GMEI-00313

Field Investigation
Article XI Facility
Nassau County Department of Health

[✓] Initial System Test
[ ] Tank Only
[ ] System Retest
[ ] New Installation
[ ] Tank Removal
[ ] Installation
[✓] Periodic Year
[ ] Abandonment

Date of Job 5 NOV 91 Time ______
Date Received 4 NOV 91 Time ______
Contractor Volino
Telephone # ______
Facility ID# 54007
Confirmation# 309H91 T01
Spill# ______

Establishment Name National Gear
Address 36 Sylvester St
Town Westbury Telephone # ______
Cross Street: ______
No. of Tanks ______ Type of Test ______

TESTED 11/8

| Tank # | #1 | #2 | | | | | |
|---|---|---|---|---|---|---|---|
| System Test | ✓ | ✓ | | | | | |
| Tank Test | | | | | | | |
| Size | 1000 | 1000 | | | | | |
| Product | #2 | #2 | | | | | |
| Leak Rate | -.043 | -.255 | | | | | |
| Pass/Fail | PASS | FAIL | | | | | |
| Fee | $50.00 | $50.00 | | | | | |
| Fee Paid | $50.00 | $50.00 | | | | | |
| Retest Needed | | | | | | | |

Tank Removal

| Tank # | | | | | | | |
|---|---|---|---|---|---|---|---|
| Visible Hole | | | | | | | |
| # Holes | | | | | | | |
| Size | | | | | | | |
| Location | | | | | | | |
| Photo | | | | | | | |

Excavation: __ Clean __ Contaminated Soil __ Free floating oil

Soil Removed (Y/N)__ Amount ______

Installation: Tank size ______ Approved plans __ Yes __ No

Notes:
Summi approved testing 5 Nov

Inspector Summiller Supervisor ______

Employee Number 271 Date 2 Dec 91

[ ] Continued on Reverse Side
[✓] Computer Entry
[✓] Data Book Entry

1 - Piping 2 - Tank
3 - Fitting 4 - Other

EH907 6/91

[redacted]ino & Sons Inc.
[redacted]& Tank Installations
Certified Tank Testing
& Removals

(516) 334-0414

# Data Chart for Tank System Tightness Test

#2 1K SOUTH

PLEASE PRINT FAC 54007 312H9ITO 11/8/91

**1. OWNER** Property ☑ Tank(s) ☑

NATIONAL GEAR
Name / Address / Representative / Telephone
36 SYLVESTER ST WESTBURY NY
Name / Address / Representative / Telephone

**2. OPERATOR**

SAME
Name / Address / Telephone

**3. REASON FOR TEST** (Explain Fully)

LOCAL CODE

**4. WHO REQUESTED TEST AND WHEN**

MR. GOODMAN (OWNER)
Name / Title / Company or Affiliation / Date
Address / Telephone

**5. TANK INVOLVED**

Use additional lines for manifolded tanks

| Identify by Direction | Capacity | Brand/Supplier | Grade | Approx. Age | Steel/Fiberglass |
|---|---|---|---|---|---|
| E+W | 1K | — | 2 | OVER 20 | STEEL |
| | | | | | |
| | | | | | |

**6. INSTALLATION DATA**

| Location | Cover | Fills | Vents | Siphones | Pumps |
|---|---|---|---|---|---|
| NORTH DRIVEWAY | BLACK TOP. | 2" | 1 1/4" | | SUCTION |
| North inside driveway, Rear of station, etc. | Concrete, Black Top, Earth, etc. | Size, Titefill make, Drop tubes, Remote Fills | Size, Manifolded | Which tanks? | Suction, Remote, Make if known |

**7. UNDERGROUND WATER**

Depth to the Water table BELOW TANK BOTTOM
Is the water over the tank? ☐ Yes ☑ No

**8. FILL-UP ARRANGEMENTS**

Tanks to be filled ______ hr. ______ Date ______ Arranged by ______ Name ______ Telephone
Extra product to "top off" and run tank tester. How and who to provide? Consider NO Lead.

Terminal or other contact for notice or inquiry ______ Company ______ Name ______ Telephone

**9. CONTRACTOR, MECHANICS,** any other contractor involved

A. Volino & Sons Inc. PAT VOLINO JR
P.O. Box 128
Carle Place, NY 11514
(516) 334-0414

**10. OTHER INFORMATION OR REMARKS**

DTS 2000 S/C
Additional information on any items above. Officials or others to be advised when testing is in progress or completed. Visitors or observers present during test, etc.

**11. TEST RESULTS**

Tests were made on the above tank systems in accordance with test procedures prescribed for as detailed on attached test charts with results as follows:

| Tank Identification | Tight | Leakage Indicated | Date Tested |
|---|---|---|---|
| #2 1K NORTH | | -.255 gph | 11/8/91 |
| | | | |
| | | | |
| | | | |

**12. SENSOR CERTIFICATION**

DTS 2000
Date
853
Serial No. of Thermal Sensor

13. This is to certify that these tank systems were tested on the date(s) shown. Those indicated as "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329.

Technicians

1. Pat Volino, Jr.
Certification # 3/3/92
2. ______

A. Volino & Sons Inc. Pat Volino Jr
Testing Contractor or Company. By: Signature
P.O. Box 128
Carle Place, NY 11514
(516) 334-0414
Address

GMEI-00315

Name of Supplier, Owner or Dealer | Address No. and Street(s) | City | State | Zip Code

## 15. TANK TO TEST

#2 1K NORTH
Identity by position

#2 FO
Brand and Grade

## 15a. BRIEF DIAGRAM OF TANK FIELD

#2 North

BUILDING

SYLVESTER ST.

## 16. CAPACITY

Nominal Capacity 1000 Gallons

By most accurate capacity chart available 1007 Gallons

From
[ ] Station Chart
[ ] Tank Manufacturer's Chart
[ ] Company Engineering Data
[X] Charts supplied with DT
[ ] Other

## 17. FILL-UP FOR TEST

NO $H_2O$

Stick Water Bottom before Fill-up ______ in. to ¼" ______ Gallons 48 in. Tank Diameter

| | | Gallons | Total Gallons on Reading |
|---|---|---|---|
| Inventory | 48 | 1007 | 1007 |
| | | TOP OFF | + 10 |
| | | | |
| | | | 1017 |

Transfer total to line 25a

## 18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

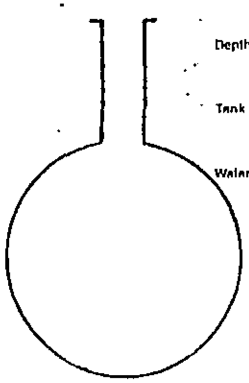
[ ] Water in tank [ ] Line(s) being tested with LVLLT
[ ] High water table in tank excavation

See manual sections applicable. Check below and record procedure in log (27).

Use maximum allowable test pressure for all tests.
Four pound rule does not apply to doublewalled tanks.

Complete section below:

1. Is four pound rule required? Yes [ ] No [X]
2. Height to 12" mark from bottom of tank 131 in.
3. Pressure at bottom of tank 4.061 P.S.I.
4. Pressure at top of tank 2.573 P.S.I.



Depth of burial 20 in.
Tank dia. 48 in.
Water table ______ in.

NOTES:

RECEIVED DEC 0 ?

The above calculations are to be used for dry soil conditions to establish a positive pressure advantage, or when using the four pound rule to compensate for the presence of subsurface water in the tank area.

Refer to N.F.P.A. 30, Sections 2-3.2.4 and 2-7.2 and the tank manufacturer regarding allowable system test pressures.

## 19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to grade* 68 in.
Add 30" for "T" probe assy. 30 in.
Total tubing to assemble — approximate 100 in.

## 20. EXTENSION HOSE SETTING

Tank top to grade* 20 in.
Extend hose on suction tube 6" or more below tank top ______ in.

*If Fill pipe extends above grade, use top of fill

22. Thermal-Sensor reading after circulation ______ digits ______ °F Between

23. Digits per °F in range of expected change ______ digits

## COEFFICIENT OF EXPANSION (Complete after circulation)

24a. Corrected A.P.I. Gravity
Observed A.P.I. Gravity ______
Hydrometer employed ______ H
Observed Sample Temperature ______ °F
Corrected A.P.I. Gravity @ 60°F. From Table A ______
Coefficient of Expansion for Involved Product From Table B ______
Transfer COE to Line 25b.

## 21. VAPOR RECOVERY SYSTEM [ ] Stage I [ ] Stage II

## 24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD

Type of Product #2FO
Hydrometer Employed 4 H
Temperature in Tank After Circulation 52.665 53 °F
Temperature of Sample 50 °F
Difference (+/-) -3 3 °F
Observed A.P.I. Gravity 33
Reciprocal 2194 Page # 37

1017 ÷ 2194 = .4635369
Total quantity in full tank (16 or 17) | Reciprocal | Volume change in this tank per °F
Transfer to Line 26a.

## 24c. FOR TESTING WITH WATER see Table C & D

Water Temperature after Circulation Table C ______ °F
Coefficient of Water Table D ______
Added Surfactant? [ ] Yes [ ] No Transfer COE to Line 25b.

25. (a) ______ Total quantity in full tank (16 or 17) × (b) ______ Coefficient of expansion for involved product = (c) ______ gallons Volume change in this tank per °F

26. (a) .4635369 Volume change per °F (25 or 24b) ÷ 1000 Digits per °F in test Range (23) = .0004635 Volume change per digit Compute to 4 decimal places. .0005 This is test factor (s) A

NORTH

GMEI-00316

Field Investigation
Article XI Facility
Nassau County Department of Health

☒ Initial System Test
☐ Tank Only
☐ System Retest
☐ New Installation
☐ Tank Removal
☐ Installation
☐ Periodic Year:
☐ Abandonment

Date of Job 11.8.91 Time ______
Date Received 11.7.91 Time ______
Contractor Volino
Telephone # ______
Facility ID# 54007
Confirmation# 32H91TC6
Spill# ______

Establishment Name Nat'l Gear
Address 36 Sylvester
Town Westbury Telephone # ______
Cross Street: ______
No. of Tanks ______ Type of Test ______

| Tank # | #1 | | | | | | |
|---|---|---|---|---|---|---|---|
| System Test | | | | | | | |
| Tank Test | | | | | | | |
| Size | 1K | | | | | | |
| Product | #10 | | | | | | |
| Leak Rate | -.255 | | | | | | |
| Pass/Fail | Failure | | | | | | |
| Fee | 50 | | | | | | |
| Fee Paid | 50 | | | | | | |
| Retest Needed | yes | | | | | | |

Tank Removal

| Tank # | | | | | | | |
|---|---|---|---|---|---|---|---|
| Visible Hole | | | | | | | |
| # Holes | | | | | | | |
| Size | | | | | | | |
| Location | | | | | | | |
| Photo | | | | | | | |

Excavation: __ Clean __ Contaminated Soil __ Free floating oil

Soil Removed (Y/N)___ Amount ______

Installation: Tank size ______ Approved plans __ Yes __ No

Notes:
8 NOV - Pat Volino called - paperwork to follow.

Inspector Stephen W. Miller Supervisor ______

Employee Number 271 Date 8 NOV 91

☐ Continued on Reverse Side
☒ Computer Entry
☒ Data Book Entry

1 - Piping 2 - Tank
3 - Fitting 4 - Other

EH907 6/91

GMEI-00317

New York State Department of Environmental Conservation
Building 40—SUNY, Stony Brook, New York 11790-2356
(516) 751-7900 or 7725
Fax # (516) 751-3839

November 19, 1991

Thomas C. Jorling
Commissioner

**CERTIFIED LETTER - RETURN RECEIPT REQUESTED**

Machinery Exchange Company
215 Center Street
New York, NY 10013
Attn: Mr. Jerry Goodman

Re: Spill #91-08583 - National Gear Co., 36 Sylvester St., Westbury, NY

Dear Mr. Goodman:

This office has been informed by Voline & Sons that one 1,000 gallon #2 fuel oil tank failed a Petrotite systems test. In accordance with Article 12 of the New York State Navigation law, I must determine if there has been any harm to the groundwaters of the State. In order for me to make this determination, you have three options:

1. Prove that it was not a leaking tank by removing all the piping from the tank and separately Petrotite test the tank. If the tank passes the Petrotite test, it is a piping leak. The tank may then be abandoned or the piping can be repaired, attached to the tank, and the system Petrotite tested. If at any time contaminated soil is found, this office must be notified immediately and the contaminated soil removed and stockpiled on site.

2. Excavate and remove the tank in the presence of a representative from this office so that an inspection of the tank and the soil can be made. If the tank is sound, and there is no evidence of product loss, nothing further need be done. If there is a problem, proceed as in 3 below.

3. Abandon the tank in-place and install several four(4) inch diameter PVC site wells extending ten(10) feet into the groundwater with a screen length of twenty(20) feet, with slot size of .020 inches. The exact location and number of wells will be determined by a representative from this office. These wells must be checked by you or your contractor, with the monitoring data submitted to this office. If no floating/dissolved product appears in the wells for twelve consecutive months, then this office will review the case for possible removal from our active list. If floating/dissolved product appears, recovery must begin immediately.

Please be advised that the in-place abandonment of underground tanks may be prohibited in some areas. You should check with the appropriate local or county authority (health department, fire marshall, environmental control unit) regarding local laws governing the storage of petroleum products.

Please call Karen DeRosa or me at 516-751-7900 or 516-751-7725 to let us know which option you will select to resolve this problem. If no response is received from you by November 29, 1991, this office will proceed with the installation of observation wells and will seek reimbursement from you in accordance with Article 12 of the New York State Navigation Law.

Sincerely,

Timothy P. Walsh

Timothy P. Walsh
Environmental Engineer I

AL:ic
cc: T. Norris, NCHD
D. Bartow, NCFM
T. Leung, NYSDEC

# Certificate of Compliance

BUILDING DEPARTMENT, TOWN OF NORTH HEMPSTEAD
MANHASSET, NEW YORK

№ 53-550

N 368571

Date June 12, 1953

This Certifies that the Oil Burner installed in Building at Sec. No. 11 Block No. 77

Lot No. 21-24 & 56-59 (Nassau County Tax Map) Address East side Sylvester Street 400' south of Main Street, New Cassel, Westbury, New York

conforms substantially to the Building Code of the Town of North Hempstead, Nassau County, New York.

Permit No. 15578 Date 6/12/53 Name of Burner Jackson & Church

Type gun Model No. XS 4 Serial No. 127719 Underwriters' Label No. CF 27500

Name of Manufacturer Nu-Way Corp.

This certificate issued to Anchor Slide Fastener Corp.

owners of the aforesaid building.

Address 36 Sylvester St., New Cassel, N. Y.

Metalcraft Development Co.

*Installed by*

69 Merrick Rd., Amityville, N. Y.

*Address*

*Building Official*

1M-1/53-WP

GMEI-00320

ORIGINAL PERMITTEE

SWS-1340, 10/75

COUNTY OF NASSAU, DEPARTMENT OF PUBLIC WORKS
Division of Sanitation and Water Supply
1 West Street, Mineola, N.Y. 11501

| DATE | PERMIT NO. |
|---|---|
| 11 24 86 | S-123999 |

## SEWER CONNECTION PERMIT ADDITIONAL CONDITIONS

36 SYLVESTER ST. WESTBURY MACHINE SHOP

The above numbered permit, attached hereto, is subject to the following additional conditions:

Special permit issued for S.T.F. only.
Required to maintain 'hold & Haul' of waste oil & spent solvents by a licensed scavanger.

Town of North Hempstead Permit required.

PLUMBER RE RUDCO PLUMBING TELE 333-1128

ORIGINAL PERMITTEE

COUNTY OF NASSAU, DEPARTMENT OF PUBLIC WORKS
Division of Sanitation and Water Supply EXPIRES 1/23/87
1 West Street, Mineola, N.Y. 11501

## SEWER CONNECTION PERMIT

This permit is issued to install a connection and discharge sewage into or disconnect from the Nassau County Sewer facility.

| FEE | DATE | DISTRICT | PERMIT NO. |
|---|---|---|---|
| 20 | 11 24 86 | 3CPW2 | S123999 |

ADD 1% OF ESTIMATED CONSTRUCTION COSTS. 0

TOTAL PAID 20

LEGAL REQUIREMENT: Before you dig, Call LILCO 661-6000 for location of any underground utilities.

| STREET ADDRESS | POST OFFICE | ZIP CODE |
|---|---|---|
| 36 SYLVESTER ST | WESTBURY | |

| CODE | PERMITTEE | HOUSE CONNECTION STREET LOCATION | DISTANCE FEET | DIR. | DEPTH FEET | IN. | L.C. | R.C. |
|---|---|---|---|---|---|---|---|---|
| B | X OWNER ☐ LESSEE | | 50 | S | 7 | 3 | 38 | 21 |

IMPORTANT: When ready for inspection, notify the proper County, Town or Village Department 24 hours in advance. Do not cover installation before inspection is made.

This Permit is issued subject to the provisions of the Nassau County Sewer Ordinance, the conditions printed on the reverse side hereof or attached hereto. Attachments on "S" series permits only.

☐ STF Only ☐ Additional Conditions Attached

COMMISSIONER OF PUBLIC WORKS

CODE: B - BUSINESS, R - RESIDENCE. 1 - 4 FAMILIES
M - MULTIPLE DWELLINGS. 5 OR MORE FAMILIES

S-SCP-1 (10/82)

GMEI-00321

#906

STATE OF NEW YORK

DEPARTMENT OF LABOR

DIVISION OF ENGINEERING

ALFRED E. SMITH STATE OFFICE BUILDING

~~ALBANY 1, NEW YORK~~

350 Fifth Avenue

# NOTICE

## TO MUNICIPAL BUILDING BUREAUS

This is to CERTIFY that Plans and Specifications of the construction hereinafter set forth, have been submitted to this department in accordance with the requirements of the Labor Law and Industrial Code of the State of New York.

Plan No. SF - 13, 505 New York 1, ~~Albany~~, N. Y., February 26, 1953

To Cornelius O'Connor
Mgr. of Bldg. Dept.
Manhasset, New York

Subject: Addition

Premises E/S Sylvester St., 425' n/o Old Country Road

Owner Anchor Slides of Fastener Copp

Applicant A. Sol Uman

Plans and Specifications of the above construction have been examined and APPROVED as per copy of letter enclosed

We therefore DO recommend the issuance of a building permit in so far as the structural requirements of the Labor Law and Industrial Code are concerned.

by. [signature]

See reverse side of this form, specifying the classes of buildings subject to the Labor Law and Code; likewise section 276 of

Form E. 191.

GMEI-00322

JOHN B. KIERNAN
SUPERVISOR

ROBERT S. BONNIE
COMMISSIONER

# DEPARTMENT OF BUILDING, SAFETY INSPECTION AND ENFORCEMENT
## TOWN OF NORTH HEMPSTEAD, MANHASSET, N.Y.

# Certificate of Approval

This certificate issued to . . .

Gerard E. Rudolph
Rudco Plumbing
478 Maple Avenue
Westbury, N.Y. 11590

DATE April 14, 1987
CERTIFICATE No. 87-167

**This Certifies that** THE BUILDING LOCATED IN Sec. No. 11 Block No. 77 Lot No. 21-24, 56-59
Nassau County Tax Map, Address 36 Sylvester Street, Westbury, N.Y. (Jerry Goodman)
Location East side Sylvester Street 425' south of Main Street
conforms substantially to the approved plans on file in this office, Permit No. 53424 Date October 22, 1986 and to all requirements of the plumbing & drainage and/or heating codes of The Town of North Hempstead, Nassau County, N.Y.
Approval of sewer connection - January 28, 1987

Frederick Goldsmith, Deputy Director Rc [signature] Building Official

BUILDING DEPT.

GMEI-00323

# Certificate of Completion

3470

BUILDING DEPARTMENT, TOWN OF NORTH HEMPSTEAD
MANHASSET, NEW YORK

DATE April 18, 1980

This Certifies that THE BUILDING LOCATED IN SEC. NO. 11 BLOCK NO. 77 LOT NO. 21-24

NASSAU COUNTY TAX MAP, ADDRESS E/side Sylvester St. 400' S/Main Street
Westbury, NY

CONFORMS SUBSTANTIALLY TO THE APPROVED PLANS ON FILE IN THIS OFFICE, PERMIT NO. 18709 DATE 4/14/80
AND TO ALL REQUIREMENTS OF THE BUILDING ZONE ORDINANCE AND BUILDING CODE OF THE TOWN OF NORTH HEMPSTEAD, NASSAU COUNTY, N. Y.

ZONE I-B COMPLETION Interior Changes

THIS CERTIFICATE ISSUED TO Sambach Associates, 11 Halter Lane, Levittown
Contractor OF THE AFORESAID BUILDING.

ADDRESS 36 Sylvester Street, Westbury, NY

Joe Zolken
OWNER - ~~BUILDER or ARCHITECT~~

ADDRESS 36 Sylvester Street, Westbury, NY

BUILDING OFFICIAL
Deputy Commissioner

cms

GMEI-00324

# Certificate of Approval

BUILDING DEPARTMENT, TOWN OF NORTH HEMPSTEAD
MANHASSET, NEW YORK

No. 68- 8
68-5024

DATE September 24, 1968

This Certifies that THE PLUMBING LOCATED IN SEC. NO. 11 BLOCK NO. 77 LOT NO. 21-24 & 56-59

NASSAU COUNTY TAX MAP, ADDRESS East side of Sylvester Street 518 feet north of Old Country Road, New Cassel, Westbury, New York

CONFORMS SUBSTANTIALLY TO THE APPROVED PLANS ON FILE IN THIS OFFICE, PERMIT NO. 47218 DATE 8/14/68
AND TO ALL REQUIREMENTS OF THE BUILDING CODE OF THE TOWN OF NORTH HEMPSTEAD, NASSAU COUNTY, N. Y.

ZONE Ind. B COMPLETION ### Installation of Plumbing Fixtures in Kitchen ### (5 sinks & 1 slop sink)

THIS CERTIFICATE ISSUED TO Grand Machinery Exchange, Inc.
owner OF THE AFORESAID BUILDING.

ADDRESS 215 Center Street, New York, New York

Harold Grodsky
PLUMBER - ~~OWNER - BUILDER - ARCHITECT~~

ADDRESS 15 Alabama Ave., Island Park, N.Y.

BUILDING OFFICIAL

A.G.A. 9/65 250

GMEI-00325

No. 53 33 **Certificate of Completion**

53-33

BUILDING DEPARTMENT, TOWN OF NORTH HEMPSTEAD
MANHASSET, NEW YORK

N 368571

DATE June 12, 1953

This Certifies that THE BUILDING LOCATED IN SEC. NO. 11 BLOCK NO. 77 LOT NO. 21-24 & 56-59

NASSAU COUNTY TAX MAP, ADDRESS East side Sylvester Street 400 feet south of Main Street, New Cassel, Westbury, New York

CONFORMS SUBSTANTIALLY TO THE APPROVED PLANS ON FILE IN THIS OFFICE, PERMIT NO. 30050 DATE 4/1/53
AND TO ALL REQUIREMENTS OF THE BUILDING ZONE ORDINANCE AND BUILDING CODE OF THE TOWN OF NORTH HEMPSTEAD, NASSAU COUNTY, N. Y.

ZONE Ind. B COMPLETION *** Addition to existing Building ***

THIS CERTIFICATE ISSUED TO Anchor Slide Fastener Corp.

owners OF THE AFORESAID BUILDING.

ADDRESS 36 Sylvester St., New Cassel, N. Y.

Uman Construction Corp.
~~OWNER~~ - BUILDER - ~~AGENT~~

BUILDING OFFICIAL

ADDRESS 435 So. Main St., Freeport, N. Y.

GMEI-00326

building conforms substantially to the approved plans and specifications and the requirements of all Ordinances and Laws applying to buildings of its class and kind. Such application shall be accompanied by a certificate from the Nassau County Department of Health covering sewage disposal.

APPLICATION IS HEREBY MADE to the Building Official of the Town of North Hempstead for the approval of the detailed statement and plans herewith submitted for the construction of the building or buildings herein described.

## GENERAL

Owner ANCHOR SLIDE FASTENER Address 115 E 23 ST N.Y.C.

If owner is a corporation, give name and title of responsible

Officer NORMAN STERN Title PRES.

~~Architect~~ PROF. ENG. A. SOLUMAN Address 435 S MAIN ST FREEPORT

Contractor UMAN CONST. CORP. Address

### Workmen's Compensation Insurance

Pursuant to Section 57 of the Workmen's Compensation Insurance Law a Certificate of Insurance is filed with this application or will be furnished by UMAN CONST. CORP covering all operations in connection therewith as follows; and no permit will be given until same is received.

Insurance Co. AMER. LUMBERMENS MUTUAL Policy No. C-416-645 Exp. Date 3-3-53

Location: County Tax Map Section 11 Block No. 77 Lot Nos. 21-24 & 26-27

EASTERLY side of SYLVESTER ST. Street 425 ft. NORTH of OLD COUNTRY RD. (Nearest Intersecting Street) NEW CASSEL (Post Office)

## ZONING

Zoning District IND. B Prevailing setback in block 10 ft.

Total percentage of lot to be occupied 35 %. Percentage at present occupied by existing buildings 0%

Size of Plot 100 ft. front 200 ft. deep. Total sq. ft. 20,000

Do you own any adjoining property? NO

Are there any existing buildings or structures on this plot? NO

If so, state use ——

State use of proposed building LIGHT MANUFACTURING

Does this property adjoin a residence district or Parkway property? NO which? ——

Will any part thereof be used for dwelling purposes? NO

Compute commercial floor area in square feet 9000

Type of construction: ordinary semi-fireproof fireproof

Dimensions of building 80 ft. front 112-6 ft. deep. Total sq. ft. 9000 FT.

Height 13 ft., stories 1 Total cubic ft. 117000

Estimated cost or value of this construction $ 35,000

Is there a municipal sewer available? NO If so, do you propose to connect to same? ——

If no sewer, state size of cesspool or septic tank SEE PLANS

Cesspool cover will be not more than 1'0" feet below finished grade.

**Unless connected with municipal sewerage system, a plan approved by the Nassau County Department of Health showing sewerage disposal facilities must be filed with this application.**

### Distances from Proposed Buildings to Property Lines

| | Front Yard | Side Yard | Side Yard | Rear Yard |
|---|---|---|---|---|
| Main building | 18'10 ft. | 15 ft. | 5 ft. | 77'6 ft. |
| Accessory building | NONE ft. | ft. | ft. | ft. |

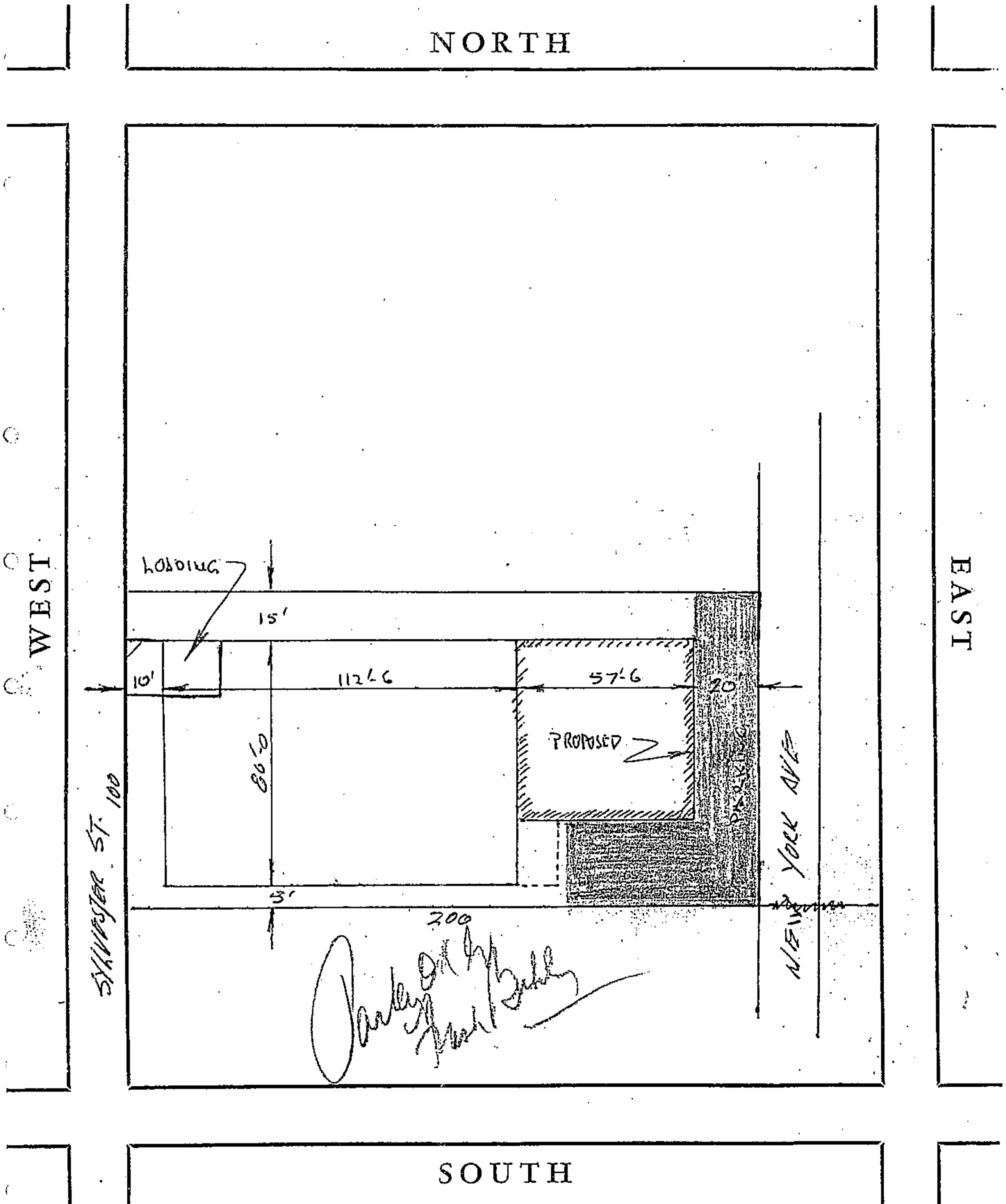
Submit detail as to parking and loading and unloading areas.

NO WORK TO BE STARTED UNTIL PERMIT HAS BEEN RECEIVED

THIS PERMIT IS ... FEDERAL REGULATION ... ALL TYPES OF CONST...

GMEI-00327

NOTE: Access driveways, loading and unloading areas and areas for off-street parking shall be surfaced in accordance with specifications of the Town of North Hempstead and no certificate of occupancy will be issued until such surfacing is complete and has been approved by the Engineer as conforming with the Town regulations. Parking spaces on the property shall be marked as shown on the detail as submitted and approved by the Building Department.




Dated ....................

Signed Walter Fiedor · Sup't

TOWN OF NORTH HEMPSTEAD
BUILDING DEPT.

Receipt No. 18709 Date 4/14/8
First Fee 12.50
Code 4 2
Permit/License Fee
By: V.P.
Sec. 11 Blk. 77 Lot 21-24

IWN OF NORTH HEMPSTEAD
BUILDING DEPT.

o. 18909 Date 4/30/80
2
cense Fee 27.50
Blk. 77 Lot 21-24

ermit

# APPLICATION FOR BUILDING PERMIT

## Town of North Hempstead

Michael J. Tully, Jr., Supervisor
BUILDING DEPARTMENT
JOHN F. McDONALD, Manager
Manhasset, New York 11030

Issued pursuant to the provisions of the Building Zone Ordinance, and the Administration and Enforcement Ordinance.

Zone I-B Checked by V.P. Section 11 Block 77 Lot 21-24 Date APRIL 8, 1980

Location EAST SIDE OF SYLVESTER ST. 400 SOUTH OF ...

Owner/Address JOE ZOLKEN 36 SYLVESTER ST. WESTBURY N.Y. 11590

Description of Work INTERIOR CHANGES ONLY

Residence ☐ Garage ☐ Business ☐ Industrial ☒ Other ☐

New Building ☐ Alteration ☒ Addition ☐ Repair ☐

Size of lot — Feet Front 400 Feet Deep 200

Size of existing buildings — Feet Front 70 Feet Deep 150 Number of stories 1

Size of proposed buildings — Feet Front INTERIOR CHANGES Number of rooms

Existing buildings used for FACTORY Proposed buildings used for OFFICE SPACE

Material of Footings EXISTING Size under Walls Under Columns

Material of Foundation Walls EXISTING Thickness Height

Material of Exterior Walls EXISTING Thickness Height No. of Stories

Size of wood studs 2x4 16 O.C. Height No. of Stories

Size of Beams: (INTERIOR)

1st floor o. c. 2nd floor o. c. 3rd floor

Size of rafters or roof beams o. c. Size of sill

Size of corner post Size of Girders — 1st 2nd 3rd

Size of Girts ties plates bridging

Size of columns Fire stops at all floors

Material of roof EXISTING Pitch of roof

Floor Construction — Fireproof YES - CONCRETE Wood

Maximum liveload for each floor — 1st 60# 2nd 3rd 4th

Size of steel beams, girders, columns, lintels, etc.

Lighting System EXISTING Fire Place

Heating System EXISTING Size of Chimney Flue

Toilet Facilities EXISTING Water Supply (Public or Pump) PUBLIC

Distance of Cesspool from Well From Adjoining Property House

Will drainage system be provided with required traps, cleanouts, and vents?

Will there be plumbing work done? NO

Name and license number of plumber

Will there be electrical work done? YES

NO WORK IS TO BE STARTED UNTIL BUILDING PERMIT HAS BEEN RECEIVED BY APPLICANT

PERMITS EXPIRE WITHIN THREE MONTHS FROM DATE OF ISSUANCE UNLESS CONSTRUCTION IS IN PROGESS

PLOT DIAGRAM

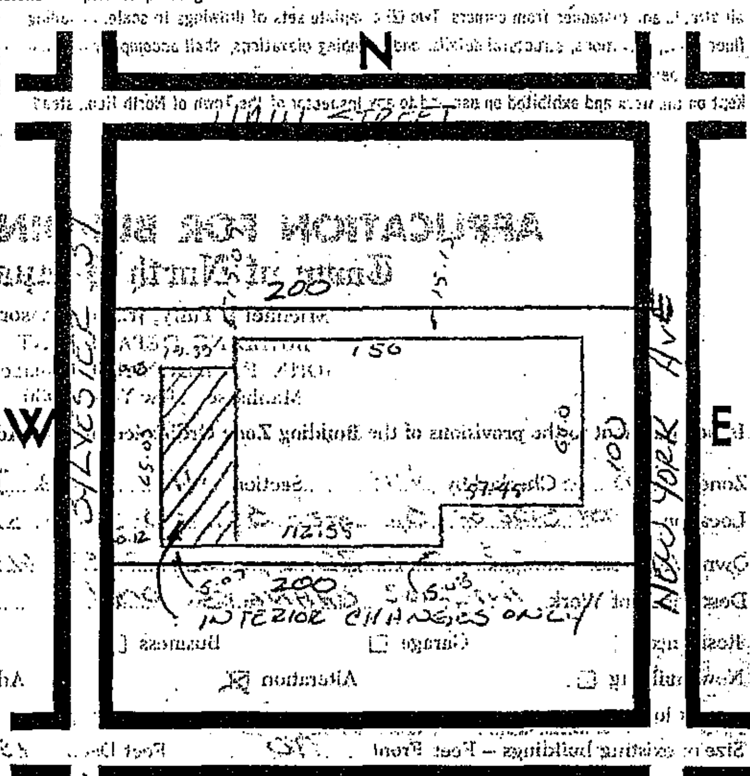
NOTE: Locate all buildings and indicate all set-back dimensions.

Applicant must indicate the building line or lines clearly and distinctly on the drawings.

If your plan is for business you must make provisions for private parking of automobiles.

If so, indicate parking area plainly. The said land and premises above referred to are situate, bounded and described as follows, viz:

BEGINNING at a point on the EAST side of SYLVESTER Dist. 400 feet SOUTH from the corner formed by the intersection of MAIN and SYLVESTER running thence 200 feet; thence 100 feet; thence 200 feet; thence 100 feet; to the point or place of beginning—being designated on the Map of NEW CASSEL As Lots No. 21-24 Map No. ........




Building permit is issued subject to the provisions of Section 57 of the Workmen's Compensation Law. Workmen's Compensation Certificate No. ........

Company AFFIDAVITS

Expiration Date: SUBMITTED

and Disability Benefits Insurance

No. ........

Company off

Expiration Date: ........

WARREN SAMBACH deposes and says:

That he resides at 11 HALTER LANE LEVITTOWN
Number and Street City or Village

in the Town of HEMPSTEAD, County of NASSAU State of NEW YORK

Note: Applicant to insert on this line his proper designation as of the following: Owner, Lessee, Architect, Engineer, Builder.

PLEASE NOTIFY!

SAMBACH ASSOCIATES
11 HALTER LANE
LEVITTOWN, N.Y. 11756
(516) 731-5508

That he is the AGENT of the property heretofore described, and set forth in this application; that he has read the foregoing application and knows the contents thereof; that the same is true to his own knowledge; that the proposed work is authorized by

JOE ZOLKER 36 SYLVESTER STREET WESTBURY NY 11590
(PRINT NAME AND ADDRESS OF OWNER)

Joe Zolkin

(If corporation, give name of corporation and name, office and address of its responsible officers.)

and the undersigned is authorized to make this application and hereby applies for a permit as set forth therein.

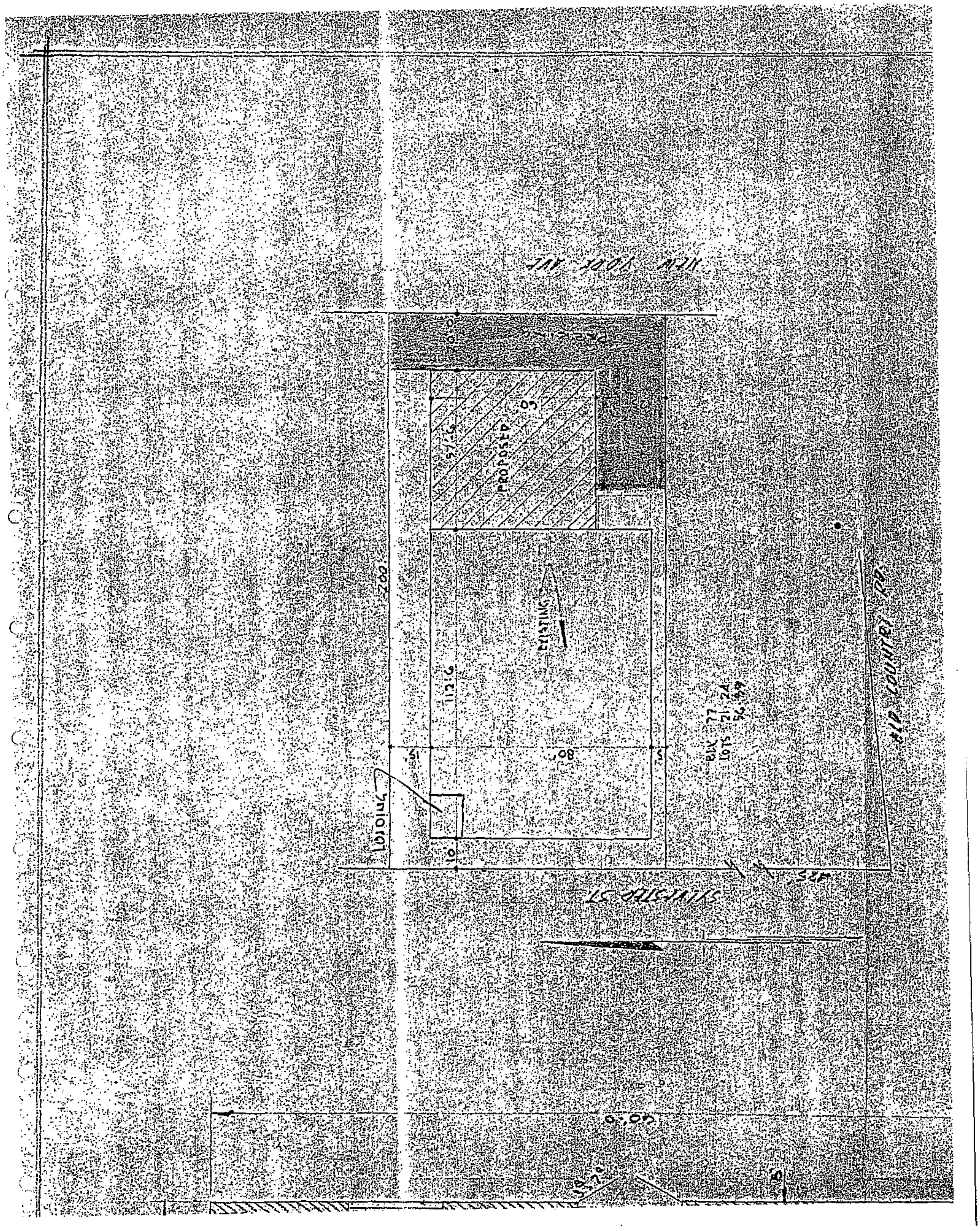
Contractor owner (off)

Address ........

Signature of Person Making Application

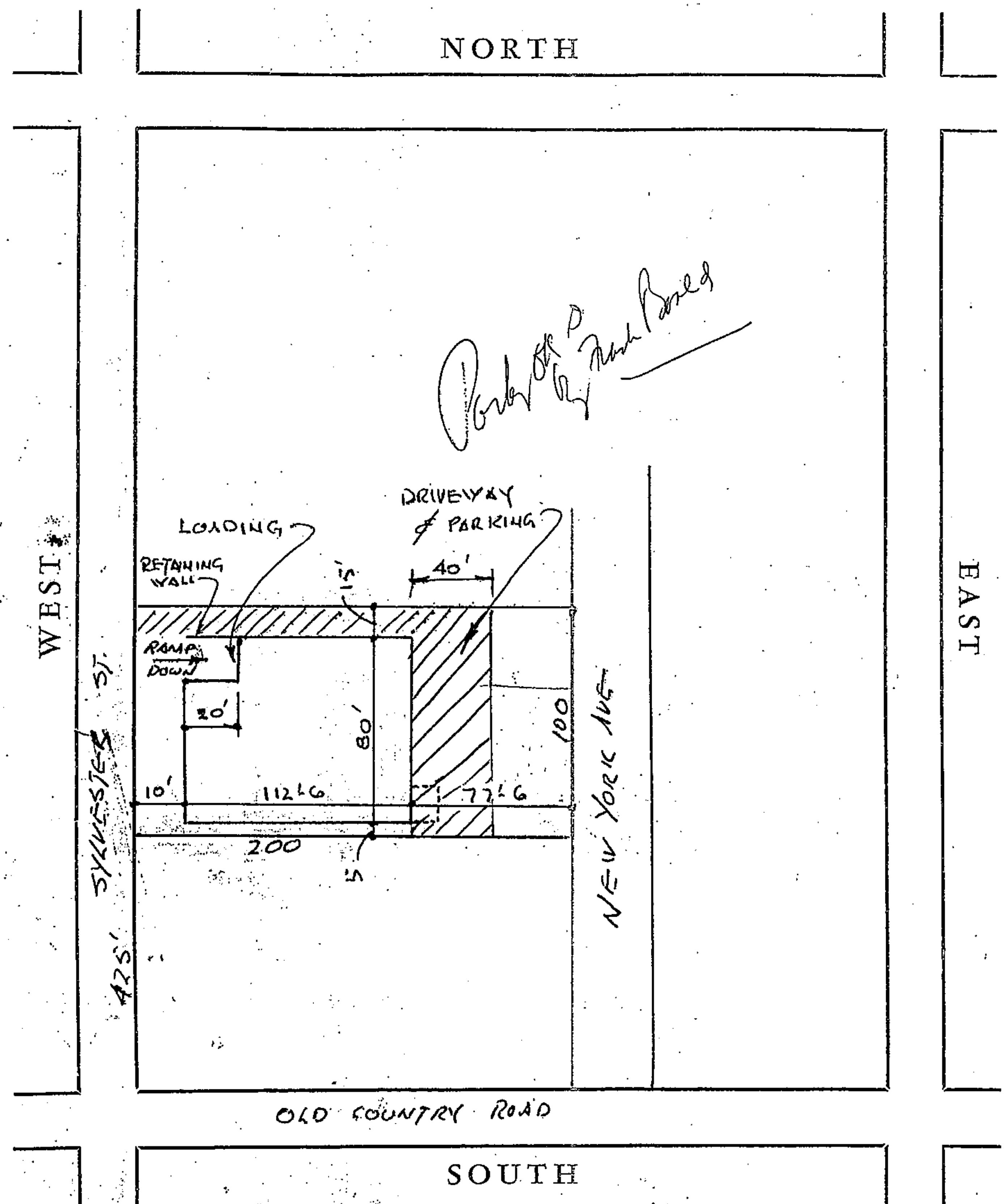
| Inspections | Date | Violations | Date | Date Cor. |
| --- | --- | --- | --- | --- |
| Excavation |  | REMOVED — VIOLATION |  |  |
| Footings |  |  |  |  |
| Foundation Walls |  |  |  |  |

GMEI-00330


NEW YORK AVE
PROPOSED
EXISTING
112.6
80'
200'
SYLVESTER ST
#112 COUNTRY RD
BLK 77
LOTS 21,24
56,59

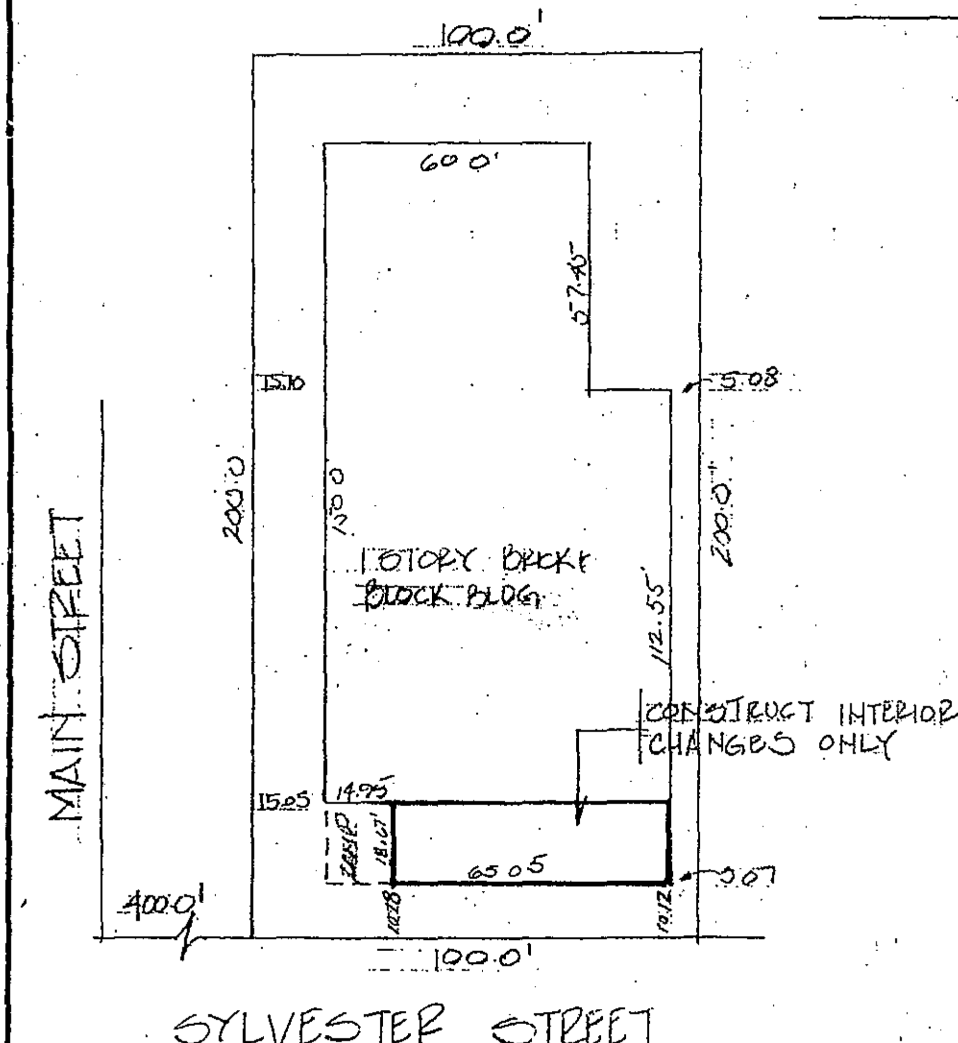
GMEI-00331

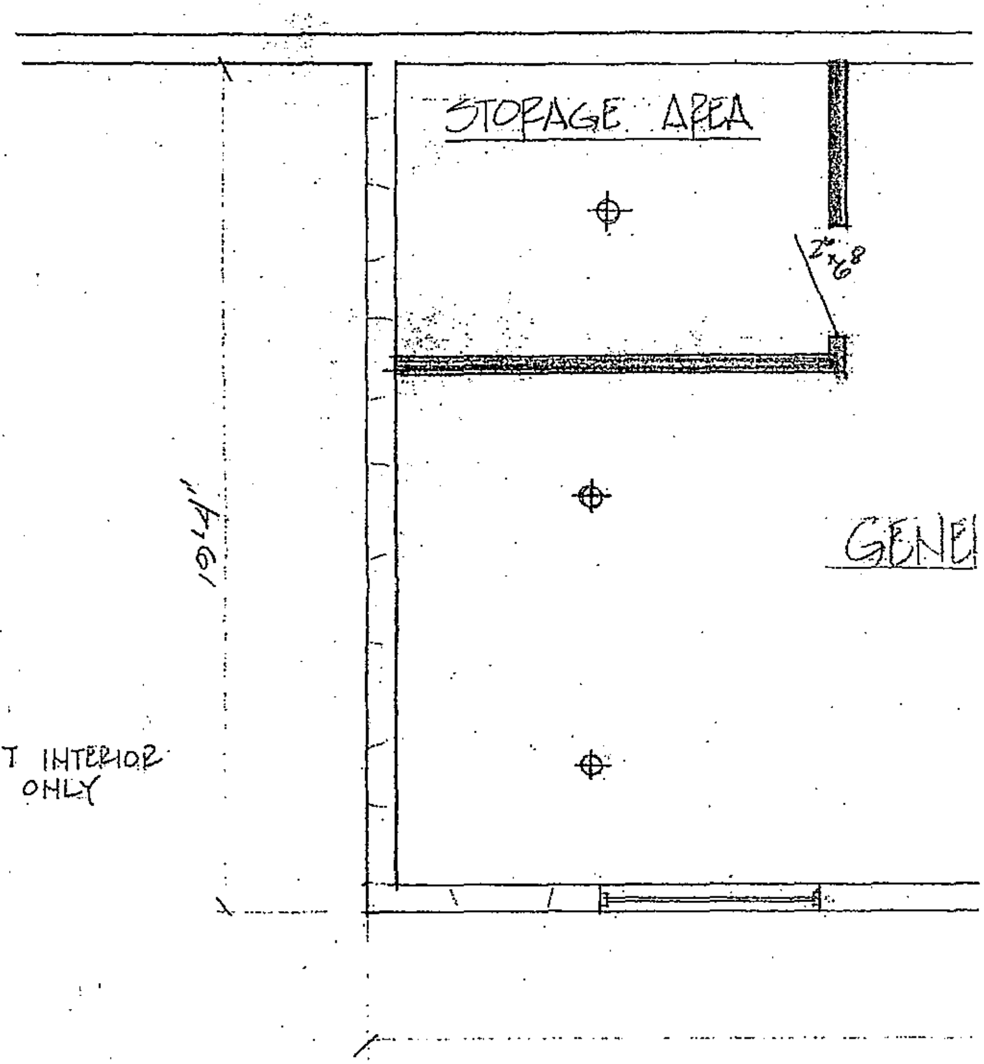
accordance with specifications of the Town of North Hempstead and no certificate of occupancy will be issued until such surfacing is complete and has been approved by the Engineer as conforming with the Town regulations. Parking spaces on the property shall be marked as shown on the detail as submitted and approved by the Building Department.



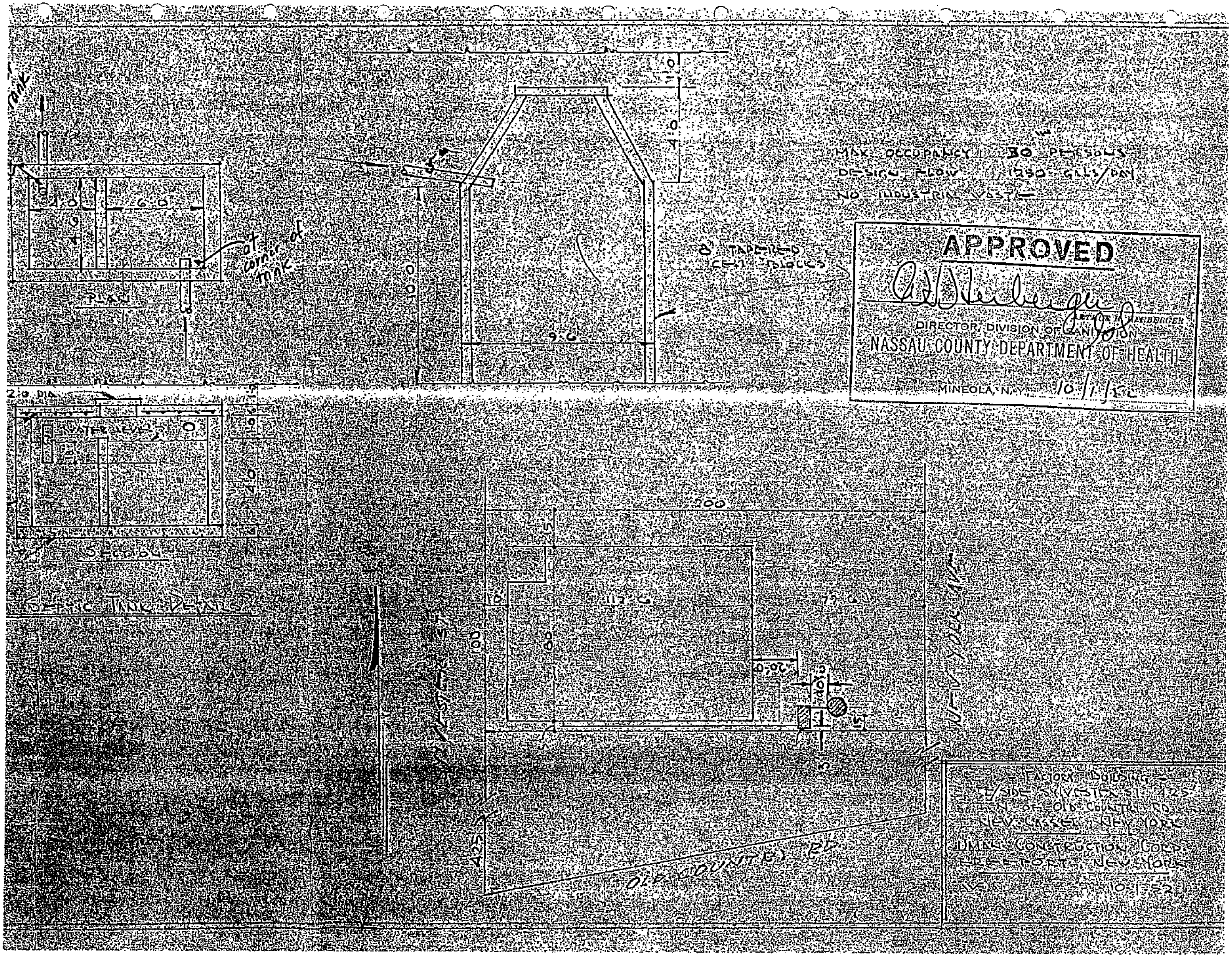

Dated 10-1-52 Signed Walter [illegible]

UMAN CONST. CORP.


100.0'
60.0'
57.45'
15.10
5.08
200.0
130.0
200.0'
1 STORY BRICK
BLOCK BLDG
112.55'
CONSTRUCT INTERIOR
CHANGES ONLY
15.05
14.95'
18.07'
65.05
9.07
400.0'
100.0'
MAIN STREET
SYLVESTER STREET


STORAGE AREA
194'

GMEI-00333


MAX OCCUPANCY 30 PERSONS
DESIGN FLOW 1250 GALS/DAY
NO INDUSTRIAL WASTE
APPROVED
DIRECTOR, DIVISION OF SANITATION
NASSAU COUNTY DEPARTMENT OF HEALTH
MINEOLA, N.Y. 10/1/52
at corner of tank
PLAN
WATER LEVEL
SECTION
SEPTIC TANK DETAIL
200
100
425
OLD COUNTRY RD
FACTORY BUILDING
NEW CASSEL, NEW YORK
FREEPORT, NEW YORK
10-1-52

# APPENDIX B:
## Photographic Log

*Site Code # 1-30-043U*
*36 Sylvester Street*
*Westbury, New York*

# Photographic Log

**36 Sylvester Street**
**Site Code 1-30-043U**
**Westbury, New York**

Photo 1

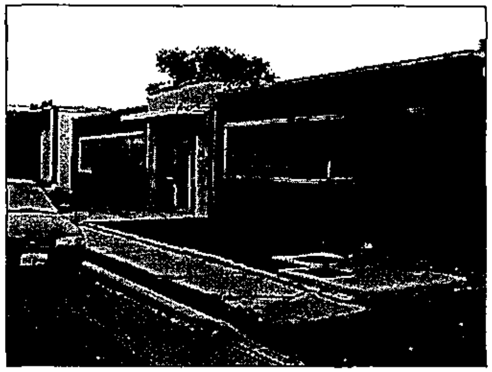


Photo 2

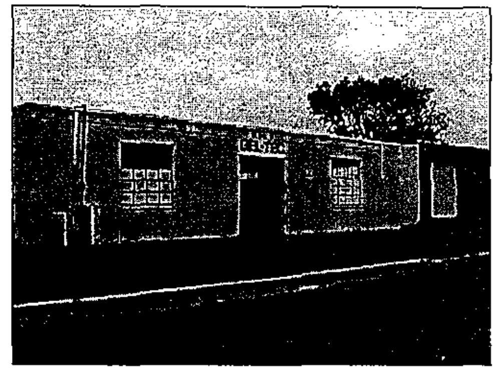


Photo 3

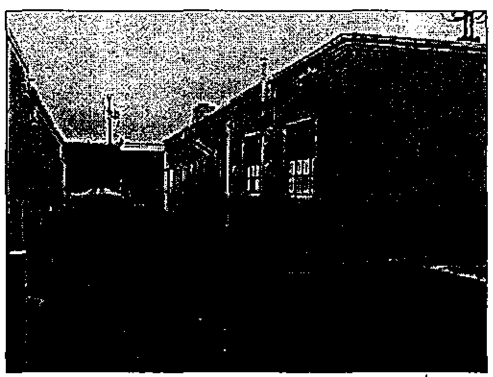
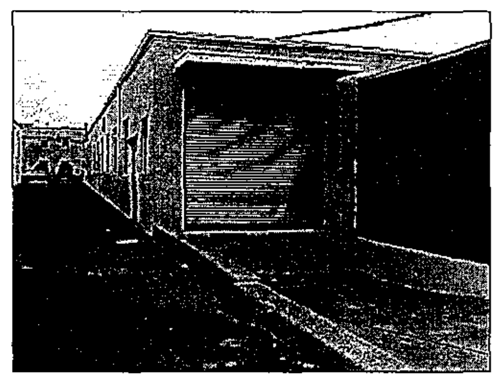


Photo 4



# Photographic Log

**36 Sylvester Street**
**Site Code 1-30-043U**
**Westbury, New York**

Photo 5

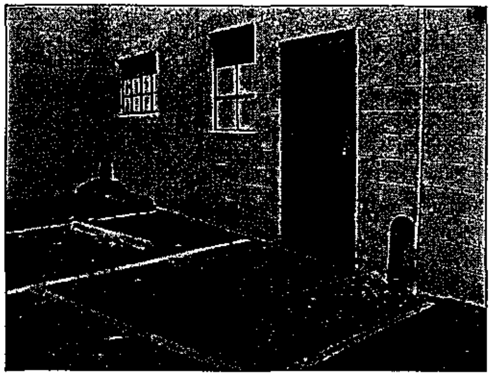


Photo 6

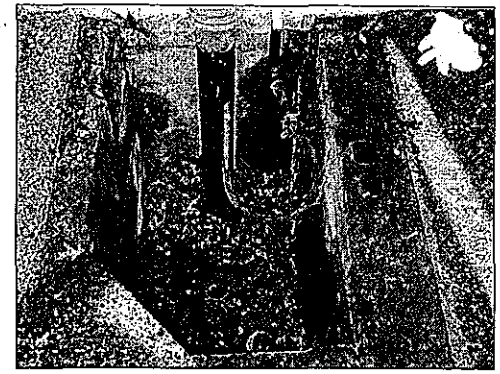


Photo 7

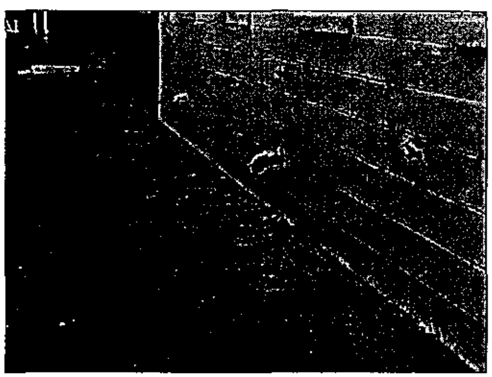
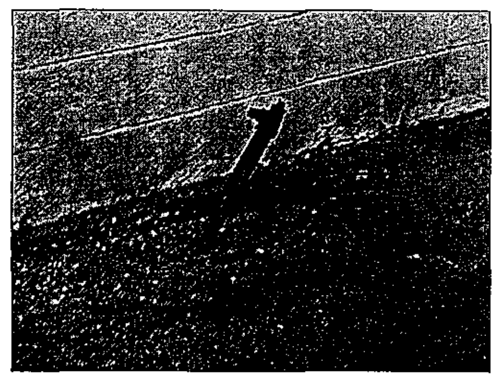


Photo 8



# Photographic Log

**36 Sylvester Street**
**Site Code 1-30-043U**
**Westbury, New York**

Photo 9

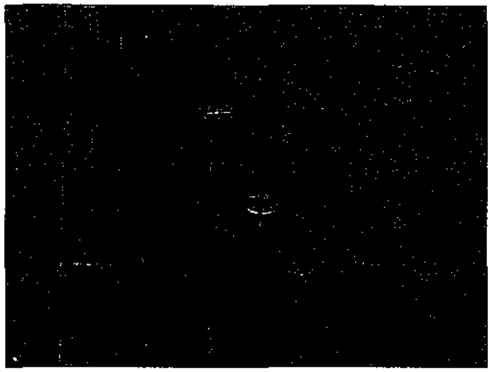


Photo 10

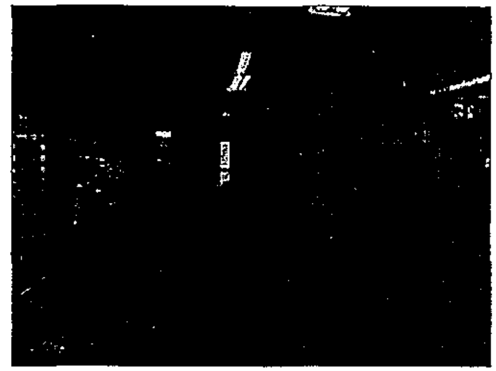


Photo 11

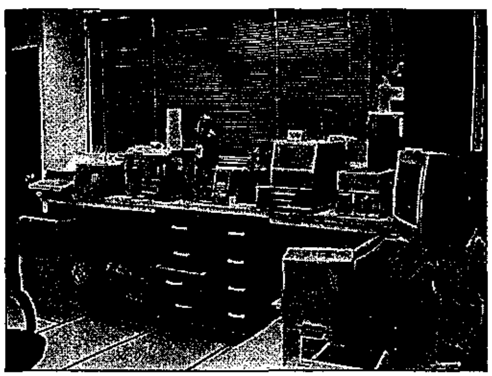


Photo 12

# Photographic Log

**36 Sylvester Street**
**Site Code 1-30-043U**
**Westbury, New York**

Photo 13

Photo 14

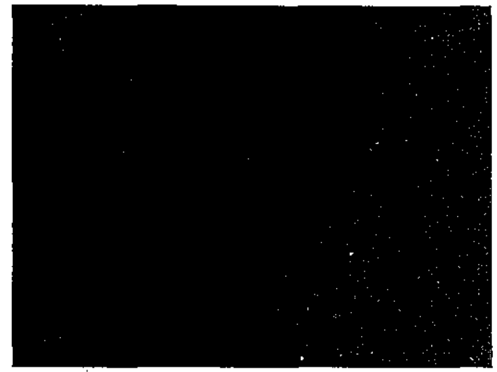


Photo 15

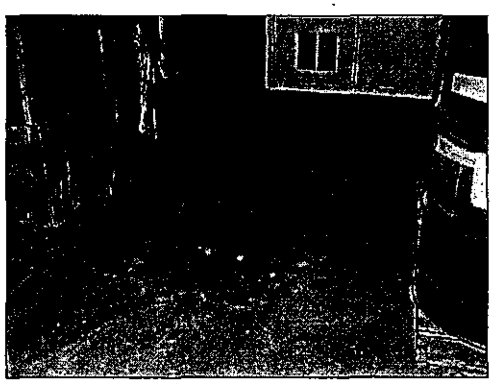
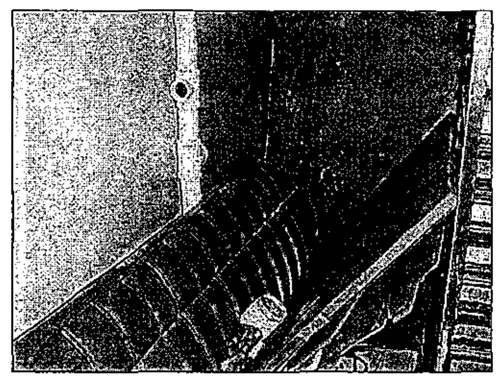


Photo 16



# Photographic Log

**36 Sylvester Street**
**Site Code 1-30-043U**
**Westbury, New York**

Photo 17

Photo 18

Photo 19

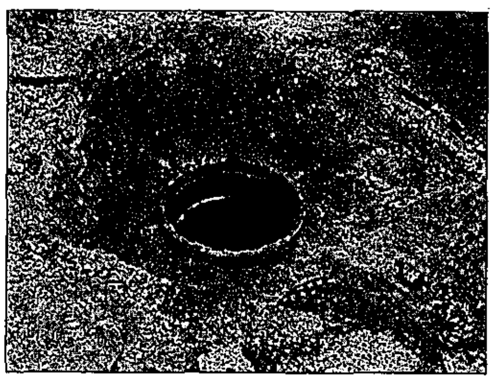
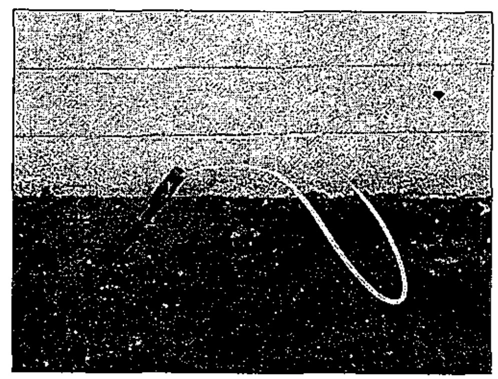


Photo 20



# Photographic Log

**36 Sylvester Street**
**Site Code 1-30-043U**
**Westbury, New York**

Photo 21

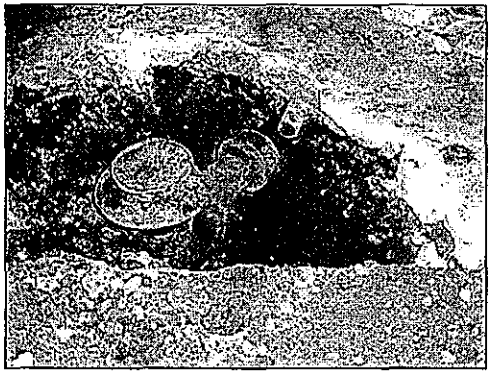


Photo 22

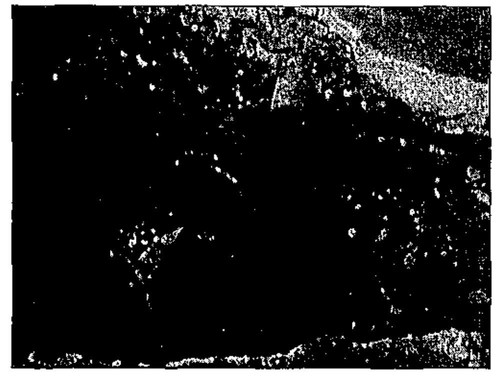


Photo 23

Photo 24

DRAFT

# INTERIM REMEDIAL MEASURES WORK PLAN

Proposed for:

36 Sylvester Street Site
Site Code 1-30-043U
Westbury, New York

Prepared for:

The New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York

October 2001

IMPACT ENVIRONMENTAL

a division of impact environmental consulting, inc.
1 VILLAGE PLAZA, KINGS PARK, NEW YORK 11754 ❖ 631.269.8800 TELEPHONE ❖ 631.269.1599 FACSIMILE ❖ IMPACTENVIRONMENTAL.COM

DRAFT

# INTERIM REMEDIAL MEASURES WORK PLAN

Proposed for:

36 Sylvester Street Site
Site Code 1-30-043U
Westbury, New York

Prepared for:

The New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York

October 2001

Jim Allen
*Project Manager*

Kevin C. Kleaka
*Quality Assurance Officer*

TABLE OF CONTENTS

GMEI-00346

## PLATES



## TABLES



## APPENDICES



DRAFT DISTRIBUTION LIST

| *Report Holders* | *Number of Reports Issued* |
|---|---|
| NYSDEC, Eastern Remediation Division | 3 |
| Grand Machinery Exchange, Inc. | 1 |
| Impact Environmental Consulting, Inc. Corporate Records | 1 |

## 1. INTRODUCTION

This Draft Interim Remedial Measures (IRM) Work Plan documents the remedial activities proposed to address the pollution source identified on the property located at 36 Sylvester Street, Westbury, New York, herein identified as the Site. The scope of this work plan is based upon the results of the preliminary Focussed Remedial Investigation (FRI) activities conducted at the Site. This IRM Work Plan is submitted in accordance with the provisions of the Order on Consent # W1-0863-00-01 between the New York State Department of Environmental Conservation (NYSDEC) and Grand Machinery Exchange, Inc.

In 1999, the Site was listed on the New York State registry of Inactive Hazardous Waste Disposal Sites resulting from a NYSDEC investigation. The NYSDEC investigation indicated that the Site was potentially a contributing source of chlorinated organic groundwater contamination. Consequently, the Site was designated as site code 01-30-043U by the NYSDEC. In 2001, Impact Environmental Consulting, Inc. performed FRI activities to identify the nature, source and extent of any contamination at the Site. Specifically, the performance of the FRI was designed to acquire strategic data to confirm or refute the Site as a contributory source of groundwater contamination. An evaluation of the preliminary FRI results indicated that the Site is not a contributing source of the regional chlorinated organic groundwater contamination. However, soil contamination was confirmed at isolated areas of the Site that required remedial activities. These confirmed point pollution sources will be the focus of the IRM procedures implemented under the scope of this work plan.

The methodologies used of this work plan were based, in part, upon the following documents: the NYSDEC Technical and Administrative Guidance Memorandum # 4030, Selection of Remedial Action at Inactive Hazardous Waste Sites; the USEPA Compendium of Superfund Field Operations Methods, dated September 1987; and the USEPA Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERLA, dated October 1988.

The tasks to be performed under the scope of the IRM process have been summarized in this report in the following sections.

- **Site Background and Setting**
- **Interim Remedial Measures**
- **Health and Safety Plan**

Presented herein is the proposed Draft Interim Remedial Measures Work Plan to be implemented by Impact Environmental Consulting, Inc. for the Site.

## 2. SITE BACKGROUND AND SETTING

### 2.1 Site Location

The Site is located at 36 Sylvester Street, Westbury, New York and is designated by the Nassau County Tax Assessors Office as Section 11, Block 77, Lots 21-24 and 56-59 (see Plate 1: Site Location Map, Westbury, New York). This location is bordered by Sylvester Street to the west, New York Avenue to the east, and is situated between Main Street to the north and Old Country Road to the south. The areal extent of the Site is approximately 20,000 square feet. The Site contains one single-story, masonry building with a footprint of 12,125 square feet. The surface area of the Site consists of asphalt parking areas and concrete walkways. The Site exhibits low topographic relief (one to three percent slopes). Refer to Plate 2: Site Map, Westbury, New York.

### 2.2 Site History

A review of local government records under the freedom of information law was conducted to provide information regarding historic Site conditions. This review has revealed the following relevant information regarding the Site.

The Site was initially developed circa 1952 with a one-story, masonry building. The building was improved with an addition onto the eastern portion of the building in June 1953. The footprint of the building was constructed over a majority of the lot, with the exception of alleys on the north and south portions of the Site. The building was historically used for industrial applications that included the manufacturing of precision machinery. Former occupants of the Site included American Express Field Warehousing Corp., Universal Transistor Products Corp. and National Gear Products.

The building interior facilitated plumbing fixtures that included several bathroom sinks and toilets, a slop sink and floor drains. The building was heated with an oil-fired burner system that was installed as part of the original construction. Said system was fueled from exterior underground fuel oil storage tanks. Circa 1991, the oil-fired heating system was converted to a natural gas-fired heating system and the exterior underground fuel oil storage tanks were removed to the satisfaction of the Nassau County Health Department. The building was serviced by an on-site sanitary disposal system that consisted of a septic tank and one cesspool at the time of construction. The building was connected to the municipal sewer system in January 1987. On-site chemical storage associated with the operations of previous occupants included cutting and lubricating oils, mineral spirits and waste oils. Presently, the Site is operated by Gel-Tec, a division of Tishcon Corp. The interior of the building is primarily utilized as a warehouse unit by Gel-Tec.

## 2.3 Geological Background Study

### *2.3.1 Subsurface Geology*

The geology of Long Island consists of thick deposits of unconsolidated, water bearing sediments resting upon a relatively impermeable, crystalline bedrock surface. The sequence of events that shaped Long Island's geology is not known with certainty, but it probably began with the formation of the original basement rocks in early Paleozoic to Precambrian time more than 400 million years ago. These basement rocks were heated and compressed (metamorphosed) by folding and faulting, producing a rugged, mountainous topography. During the subsequent period ending with the late Cretaceous Epoch 100 million years ago, erosion reduced the land to a nearly planer surface that gently tilted to the southeast.

During the late Cretaceous Epoch (60-100 million years ago), streams brought sediments from the north and the west to the Long Island area on the continental margin, forming a permeable sand layer (Lloyd Sand Member of the Raritan Formation) and overlying clay member (clay member of the Raritan Formation) upon the bedrock surface. After a short period of erosion or non-deposition, thick, permeable beds of river delta clay, sand, and gravel were deposited on the Raritan Formation; these deposits comprise the Magothy Aquifer. Toward the close of the Late Cretaceous period (approximately 60 million years ago), a sand and clay unit (Monmouth Group) of low permeability was deposited in shallow marine waters in the area that now constitutes Long Island's south shore.

A long period of non-deposition, or possibly deposition followed by erosion, occurred after the Cretaceous era. Geologic activities during this time left few sedimentary traces, but streams flowing across Long Island cut deep valleys into the Magothy. It was not until late Pleistocene (Wisconsinian) glaciation- some 20 to 200 thousand years ago- that there were any significant additions to Long Island's geologic record. Valleys were filled and the other deposits were almost completely buried by glacial deposits. Prior to the southward movement of the Pleistocene ice sheets to Long Island, an extensive clay unit (Gardiners Clay) was deposited in shallow marine and brackish waters along the shores of what is now Suffolk County. This unit rested upon the Magothy and Monmouth Group, and acted as a confining layer. The northern portions of the Gardiners were subsequently eroded by advancing ice and glacial meltwaters, and Gardiners Clay beds are now found only in the south shore area.

In the area of the Site the bedrock exists at an elevation of approximately seven hundred feet below sea level. The top of the Raritan confining unit exists at an elevation of five hundred feet below sea level (Smolensky and Feldman, 1988). The top of the Magothy Aquifer exists at an elevation of approximately 30 feet above sea level. There is no confining layer with extensive horizontal continuity overlying the Magothy Aquifer. In many areas of Westbury and Hicksville there is no confining layer between the Magothy and Glacial Aquifers. They are only differentiated by their hydraulic conductivities (50 vs. 270 ft/day) (Franke and Cohen, 1972). Localized clay lenses are present within this area of the Magothy Aquifer, but their location and extent have not been delineated.

### *2.3.2 Topography*

The Pleistocene glaciation created the hilly Ronkonkoma moraine along Long Island's "spine" and south fork, and the Harbor Hill Moraine along the North shore and the North fork. Erosion of these morainal deposits (as the glacier melted away from Long Island) created extensive outwash plains of sand and gravel in the intermorainal area and south to the Atlantic Ocean. These highly permeable deposits comprise the upper glacial aquifer and represent the majority of Long Island's surficial sediments. Some local confining clay units were also formed from glacial materials in intermorainal lakes and tidal lagoons. Since the end of glaciation, about 12,000 years ago, Holocene beach and marsh deposits have been formed along the marine edge, and within stream corridors and ponds.

The elevation of the Site, as presented on the United States Geologic Survey (USGS), Hicksville Quadrangle Map, approximates one hundred twenty (120) feet above sea level. The USGS Map, which was base dated 1943, field checked in 1967, and photorevised in 1979, did not depict a structure on the Site (the property is within an area in which only landmark buildings were mapped).

*2.3.3 Soil Component Identification*

Nassau County is divided into ten general soil units, or groups of soils geographically associated in a characteristic repeating pattern, according to the Soil Survey of Nassau County, New York (U.S. Department of Agriculture, U.S. Soil Conservation Service). The general soil component of the Site, as defined by this publication, is the Urban Land Association. This Association consists of dominantly nearly level or gently sloping areas that are covered by buildings, roads, sidewalks, and parking lots on plains and low hills.

The Soil Survey also describes detailed soil units that each represent an area on the landscape consisting of one or more soils for which the unit is named. The detailed component of the Site is identified by this Survey as the Urban Land-Hempstead Complex (Uh). This soil type consists of urbanized areas and very deep, well-drained soils on nearly level plains. Slope ranges from 0 to 3 percent, and slope is less than 2 percent in most of the areas that are not near drainage-ways or depressions.

This unit is described as a soil complex because the urbanized areas and Hempstead soils are so intermingled that it was not practical to classify them separately. This soil complex is made up of about 75 percent urbanized areas, 20 percent Hempstead soils, and 5 percent other soils. The urbanized areas consist of buildings, roads, driveways, parking lots, and other man-made structures.

Typical sequence, depth and composition of the layers of Hempstead Series Soils are as follows:

| Depth In Soil Profile | Soil Description |
|---|---|
| Surface to 11 inches | black silt loam |
| 11 to 15 inches | dark brown silt loam |
| 15 to 29 inches | yellowish brown silt loam |
| 29 to 33 inches | strong brown very gravelly loamy sand |
| 33 to 60 inches or more | very pale brown sand and gravel |

*2.3.4 Hydrology*

The Site lies within Hydrogeologic Zone I, The Deep Flow - Magothy Recharge Area (Nassau-Suffolk 208 Study - Water Management Zones in Nassau and Suffolk). Zone I is characterized by deep groundwater recharge and vertical groundwater flow.

*2.3.5 Regional Groundwater Characteristics*

Regional groundwater flow direction in the area of the Site is toward the southwest. The water table is encountered at approximately fifty-five feet below grade.

*2.3.6 Site Groundwater Quality*

The FRI activities conducted on the Site included a groundwater sampling and acquisition plan to define Site groundwater quality with respect to potential point and unidentified non-point pollution sources. Nineteen groundwater sampling locations were sited on and off-Site to implement the plan (see Plate 3: Sample Acquisition Plan, Westbury, New York). Groundwater sampling activities were conducted utilizing a Geoprobe operating system for the installation of temporary groundwater well points. Two groundwater sampling locations, identified as UIW-001 and UIW-002, were sited within the center of the two abandoned cesspools associated with the former on-site sanitary disposal system. These cesspools were classified as underground injection wells (UIWs) and were identified as a potential pollution source. Fifteen additional groundwater sampling locations were sited to represent groundwater quality hydraulically up-gradient and down-gradient of the Site pollution source. The hydraulically up-gradient groundwater sampling locations that were intended to intercept any groundwater contaminants entering the Site were identified as GP-003, GP-004, GP-005, GP-006 and GP-007. These sampling points were sited on the eastern border of the Site. In addition, five groundwater sampling locations were sited on the eastern side of New York Avenue (to the east of the Site) off-Site to represent groundwater hydraulically up-gradient of the Site. The hydraulically down-gradient sampling locations (relative to the Site pollution source) were identified as GP-008, GP-009 and GP-010. These sampling points were sited to the southwest of the Site pollution source.

Three water samples were obtained from each temporary groundwater well point. The groundwater samples secured from each temporary well point were acquired at depths intervals of 56'-60', 66'-70' and 76'-80' below existing grade. The laboratory analysis of the groundwater samples (see Table 1: Non-Point Data Summary, Westbury, New York) obtained from the investigation was consistent with the specifications outlined in the Final FRI Work Plan. Compliance with the data quality objectives scoped for the laboratory analysis of the representative samples will be discussed in the FRI report.

The groundwater analytical results indicated that a hydraulically up-gradient groundwater contaminant plume exists from an off-site source. The off-site source was not determined under the scope of the FRI activities. In general, a comparative analysis of the hydraulically up-gradient and down-gradient groundwater data failed to indicate any significant changes in the contaminant concentrations. The contaminant concentrations were within an order of magnitude. A further detailed discussion of the contaminant concentrations and distribution will be provided in the FRI report.

## 3. INTERIM REMEDIAL MEASURES

The IRM activities proposed for the Site were designed to address the pollution source identified during the performance of the FRI activities. The extent of the pollution source was determined to be isolated to the unsaturated subsurface soil of the Site. Accordingly, the treatment technologies developed for the pollution source at the Site have been designed to permanently remove or significantly decrease the toxicity, mobility and volume of contaminants to the maximum extent practicable. An evaluation of the effectiveness of the IRM activities will be implemented through the performance of a sampling and analysis plan to assure compliance with applicable New York State Standards, Criteria and Guidelines (SCGs).

### 3.1 Pollution Source Summary

All of the information presented in this section of the report was compiled during the performance of the FRI activities.

The performance of the Site survey that included an exterior inspection, interior inspection, remote sensing survey and destructive survey identified the presence of one Site pollution source. This pollution source was identified as the former on-site sanitary disposal system. The former on-site sanitary disposal system was identified to consist of two cesspools, which were classified as Class V underground injection wells. The components of the former on-site sanitary disposal system were subjected to investigative activities under the scope of the FRI activities to determine the nature and extent of any contaminants to Site soil and groundwater.

#### *3.1.1 Pollution Sources UIW-001 and UIW-002*

A remote sensing survey was performed over the entire exterior surface of the Site to identify any subsurface structures that may represent point or non-point pollution sources. The survey was performed with a GSSI SIR System-2 ground penetrating radar unit. An analysis of the data acquired from the survey detected two significant subsurface dielectric anomalies representative of potential pollution sources. The subsurface patterns identified in the ground penetrating radar images were consistent with the size and shape of concrete domes associated with underground injection wells. Based on the location of these detected anomalies, it was suspected that these subsurface features represented sanitary cesspools.

Accordingly, a destructive survey was preformed with respect to these suspected sanitary cesspools. The destructive survey included the installation of direct sensing probes to identify the presence of any subsurface structures (i.e. the pre-cast walls and domes). Said probes confirmed the presence of two subsurface structures corresponding with the location of the detected anomalies. Accordingly, excavation activities were conducted to expose the subsurface structures. The excavation revealed the presence of two abandoned underground injection wells (cesspools) associated with the former on-site sanitary disposal system. Said UIWs had not been backfilled. These UIWs were observed during all dye tracing activities. None of the dye tracing activities detected any evidence that indicated interior plumbing features were actively connected with these UIWs. Furthermore, a septic tank was not suspected as being present based on the close proximity and direction of subsurface piping within the primary UIW in reference to the sanitary trap. Although, the site plans at the time of construction depicted a septic tank and one cesspool, it was expected that the septic tank was never installed and an additional cesspool was utilized in lieu of the septic tank. As such, the UIWs were identified as point-pollution sources.

To evaluate the impact of these pollution sources on Site soil quality, soil samples were secured within the center of each UIW structure. Continuous soil sampling was performed from the invert of each structure (approximately 13' BEG for UIW-001 and 18' BEG for UIW-002) to ten feet below the invert of each structure. Discrete soil samples were subsequently obtained at depth intervals of thirty to thirty-two and forty-three to forty-five feet BEG. Six subsurface soil samples were selected for subsequent laboratory analysis from each UIW as per the Final FRI Work Plan.

The laboratory analysis of the soil samples secured from within the underground injection well, identified as UIW-001, detected concentrations of target volatile, semi-volatile organic and inorganic (heavy metal) analytes (see Table 2: Point Summary Data, Westbury, New York). The concentrations of target volatile organic analytes were below the applicable SCGs in the invert sample (13.5 to 18 feet BEG), thirty to thirty-two and forty three to forty-five feet BEG. The concentrations of target semi-volatile organic analytes were below the applicable SCGs in the invert sample (13.5 to 18 feet BEG). The concentrations of several target inorganic analytes from the invert sample, specifically chromium, copper, mercury and zinc, were above the applicable SCGs (see Table 3: Contaminant Concentrations in Soil and Applicable SCGs, Westbury, New York).

The laboratory analysis of the soil samples secured from within the underground injection well, identified as UIW-002, failed to detect any concentrations of target volatile organic analytes above minimum detection limits from the invert sample (18 to 22 feet BEG), thirty to thirty-two or forty one to forty-three feet BEG. The laboratory analysis detected one target semi-volatile organic anlayte (bis-2-ethylhexyl-phthalate) at the invert sample (see Table 2). The detected concentration was below the applicable SCG. The laboratory analysis detected target inorganic analytes at the invert sample. The detected concentrations were below the applicable SCGs (see Table 3). The original laboratory analysis report (data package for results summary) as prepared by Chemtech is presented in Appendix G of this document.

The laboratory analysis results of the soil samples secured with respect to the underground injection wells associated with the former on-Site sanitary disposal system confirmed that this pollution source was not a contributing source to the underlying regional chlorinated organic groundwater contamination. The groundwater sampling plan conducted with respect to the point pollution source on the Site further confirmed this conclusion.

## 3.2 Development, Screening and Selection of Remedial Alternatives

### *3.2.1 Remedial Action Objectives*

The remedial action objectives for the IRM activities proposed for the pollution source at the Site are to permanently remove or significantly decrease the toxicity, mobility and volume of contaminants in accordance with the applicable New York State Standards, Criteria and Guidelines (SCGs). The purpose of meeting these objectives shall be for the overall protection of human health and the environment. The applicable SCGs for Site soil quality is defined under the

New York State Department of Environmental Conservation Technical and Administrative Guidance Memorandum (TAGM) #4046, Determination of Soil Cleanup Objectives.

### *3.2.2 Development and Screening of Remedial Alternatives*

The development of remedial alternatives will consider four fundamental options based on the nature and extent of contaminants identified at the Site pollution sources. The primary contaminants identified at the Site from the performance of the FRI consisted of industrial organic and inorganic contaminants. The remedial alternatives to be considered for the Site pollution sources include: 1) removal and off-site disposal; 2) in-situ treatment or extraction; 3) isolation; and 4) no action, and are discussed below.

*Removal and Off-Site Disposal*

The remedial alternative identified as removal and off-site disposal involves the physical removal of contaminated media from a known pollution source and the off-site disposal of the contaminated media at a proper waste disposal facility. This type of remedial action is limited by the nature and extent of the contaminants, and the capabilities of the construction equipment performing the work. The nature of the contaminants, which includes type and concentrations, must be within acceptable limits for waste disposal facilities to receive and properly dispose of the waste. The location and extent of the contaminants may limit the ability of conventional construction equipment to adequately remove the soil contamination. Therefore, an assessment of the horizontal and vertical extent of Site contaminants requiring remedial action must be determined. This includes determining the accessibility of the construction equipment into the location of source area (i.e. within a building). This type of remedial action will sufficiently meet the remedial action objectives to permanently remove contaminants (in a timely fashion) when performed on pollution sources that are limited or isolated in extent. To assess the effectiveness of this type of remedial action, it is necessary to design and implement a sampling and analysis program subsequent to the performance of the remedial activities. This program will include securing representative samples for analysis to determine if any residual contamination exists at the pollution source. If residual contaminants are identified at a pollution source exceeding the applicable SCGs subsequent to the performance of remedial activities, it may be necessary to consider further remedial alternatives to meet remedial action objectives.

*In-Situ Treatment or Extraction (Non-Biological)*

The remedial alternative identified as in-situ extraction involves the in-place treatment of contaminated media by technological processes without the physical removal of the affected media. The contaminants are stripped or volatilized from the contaminated media by altering subsurface conditions to that which induces the removal of contaminants. This type of remedial action will mitigate or permanently remove contaminants from the affected media over a certain time period. The time period and effectiveness for which the contaminants are removed or extracted is dependent on the nature and extent of the contaminants at the pollution sources and the subsurface geology at the Site. The nature of the contaminants must be primarily composed of compounds with relatively light molecular weights. Such compounds typically consist of volatile organic compounds and are readily volatilized upon introducing vacuum pressures into the subsurface. The extent of the contaminants at the pollution sources must be significantly beyond the capabilities of the removal and disposal remedial alternative. The extent of the contamination is typically greater than ten feet below grade and has a significant volume. When applying this type of remedial action, Site-specific factors such as geology and hydrology must be considered. The soil type that is being treated must have an adequate porosity and permeability for the contaminants to desorb and/or volatilize. In addition, the groundwater elevations must be typically greater than five feet below grade. To assess the effectiveness of this type of remedial action, it may be necessary to secure representative samples of the affected media in the future to monitor the progress or completeness of the action for meeting the applicable SCGs.

The contaminants stripped from the affected media using this type of remedial action are typically released into the atmosphere. Remedial action objectives for this type of remedial action must consider potential risks of human exposure from contaminants leaving one media (soil) and entering another media (air). For this reason, it is necessary to assess the contaminant concentrations entering the atmosphere to protect human health. This assessment includes gauging the air quality at a release point from the treatment or extraction technology system. In addition, these activities will determine, in part, the effectiveness of the remedial action technology. Based on the rate of contaminant concentrations extracted from the pollution source, it may be necessary to filter or treat the air effluent to meet comprehensive remedial action objectives. To assess the air quality entering the atmosphere, it is necessary to design and implement an operation and maintenance plan during the operation of the remedial technology. This program will include securing representative air samples for analysis to determine what level, if any, of air treatment is necessary. If required, the treatment of air may be implemented using carbon charcoal filters. The waste retained in the filters will require subsequent removal and proper disposal at an off-site disposal facility.

*Bio-Inoculation*

In-situ groundwater bioremediation is a technology that encourages growth and reproduction of indigenous microorganisms to enhance biodegradation of organic compounds in the saturated zone. In-situ groundwater bioremediation can effectively degrade organic compounds that are dissolved in groundwater. In-situ groundwater bioremediation can be effective for the full range of petroleum hydrocarbons. The low-molecular-weight, more water soluble compounds are degraded more rapidly and to lower residual levels than are high-molecular-weight, less soluble compounds.

Bioremediation generally requires a mechanism for stimulating and maintaining the activity of these microorganisms. This mechanism is usually an inoculation for providing one or more of the following: An electron acceptor (oxygen, nitrate); nutrients (nitrogen, phosphorus); and an energy source (carbon). Generally, electron acceptors and nutrients are the two most critical components of any bio-inoculation.

The key parameters that determine the effectiveness of in-situ groundwater bioremediation are:

- hydraulic conductivity of the aquifer, which controls the distribution of electron acceptors and nutrients in the subsurface.
- biodegradability of the petroleum constituents, which determines both the rate and degree to which constituents will be degraded by microorganisms.

- location of contamination in the subsurface.
- Contaminants must be dissolved in groundwater or adsorbed onto more permeable sediments within the aquifer.

In general, the aquifer medium will determine hydraulic conductivity. Fine-grained media (e.g., clays, silts) have lower permeability than coarse-grained media (e.g., sands, gravels). Bioremediation is generally effective in permeable (e.g., sandy, gravelly) aquifer media. However, depending on the extent of contamination, bioremediation also can be effective in less permeable silty or clayey media. In general, an aquifer medium of lower permeability will require longer to clean up than a more permeable medium. Soil structure and stratification are important to in-situ groundwater bioremediation because they affect groundwater flow rates and patterns when water is extracted or injected. Structural characteristics such as microfracturing can result in higher permeabilities than expected for certain soils (e.g., clays). In this case, however, flow will increase in the fractured media but not in the unfractured media. The stratification of soils with different permeabilities can dramatically increase the lateral flow of groundwater in the more permeable strata while reducing the flow through less permeable strata. This preferential flow behavior can lead to reduced effectiveness and extended remedial times for less-permeable strata.

The biodegradability of a petroleum compound is a measure of its ability to be metabolized by hydrocarbon-degrading bacteria or other microorganisms. The chemical characteristics of the contaminants will dictate their biodegradability. For example, heavy metals are not degraded by bioremediation. The biodegradability of organic compounds depends on their chemical structures and physical/chemical properties (e.g., water solubility, water partition coefficient). Highly soluble organic compounds with low molecular weights will tend to be more rapidly degraded than slightly soluble compounds with high molecular weights. The low water solubilities of the more complex compounds render them less bioavailable to petroleum-degrading organisms. Consequently, the larger, more complex chemical compounds may be slow to degrade or may even be recalcitrant to biological degradation.

The location, distribution, and disposition of petroleum contamination in the subsurface can significantly influence the likelihood of success for bioremediation. This technology generally works well for dissolved contaminants and contamination adsorbed onto higher permeability sediments (sands and gravels). However, if the majority of contamination is (1) in the unsaturated zone; (2) trapped in lower permeability sediments, or (3) outside the "flow path" for nutrients and electron acceptors, this technology will have reduced impact or no impact.

Nutrient injection systems may not be necessary at all, if the groundwater contains adequate amounts of nutrients, such as nitrogen and phosphorus. Microorganisms require inorganic nutrients such as nitrogen and phosphate to support cell growth and sustain biodegradation processes. Nutrients may be available in sufficient quantities in the aquifer but, more frequently, nutrients need to be added to maintain adequate bacterial populations.

*Isolation or Capsulation*

The remedial alternative identified as isolation involves the controlled containment or capsulation of contaminants at Site pollution sources. The contaminants at the pollution sources are isolated in mobility by designing barriers or containment structures that prevent or limit migration pathways. This alternative is effective in the short-term by reducing human health exposure risks. However, this alternative does not decrease the toxicity or volume of the contaminated media for long-term effectiveness and therefore will not meet the applicable SCGs. The pollution source remains persistent in the environment and may be exposed in the future during property redevelopment or demolition activities.

*Natural Attenuation*

The remedial alternative identified as no action involves the natural attenuation or breakdown of contaminants at pollution sources without any remedial action. This type of remedy will not permanently remove or significantly decrease the toxicity, mobility and volume of contaminants in the short-term. This type of remedy is typically limited to pollution sources that pose nominal risk to human health and the environment. The long-term effectiveness is dependant on the nature and extent of the contaminants at the Site pollution sources. Site pollution sources that are relatively persistent in the environment will typically exhibit residual traces of contaminants over prolonged time and present future exposure and pathway risks.

*3.2.3 Selection of Remedial Alternatives*

Based on an understanding of the nature and extent of the pollution source identified from the performance of the FRI, the remedial alternative selected for the Site include removal / off-site disposal. The pollution source was determined to be isolated to Site soil. Further, the vertical extent of the pollution source was determined to be limited in depth, which can be effectively removed by conventional construction equipment. The nature of the pollution source consists of industrial heavy metals contaminated soil. This selection should sufficiently meet the remedial action objectives and the applicable SCGs.

## 3.3 Detailed Analysis of Remedial Alternatives

*3.3:1 Removal and Off-Site Disposal*

*Pollution Source UIW-001*

The underground injection well, identified as UIW-001 during the FRI activities, will be uncovered and accessed utilizing an excavator. The contaminated media contained within the UIW will be classified pursuant to Title 6 NYCRR Part 371. The contaminated sediment contained within the underground injection well will be evacuated utilizing an industrial vacuum truck and pressurized water-spraying device to the appropriate depth feasible (no liquids exist in the UIW). The objective of the evacuation activities will be to remove contaminated sediment to approximately five feet below the invert or base of the structure. The underground injection well structure will remain unaffected from the removal activities to efficiently remove the contaminated sediment. The contaminated sediment removed from the underground injection well will be transferred and contained in the vacuum truck for proper off-site disposal. No on-site storage of the contaminated media will be necessary. A sampling and analysis plan will be implemented preceding the backfilling of the excavation.

One endpoint sample will be secured from the excavated invert of the underground injection well. The sample will be analyzed utilizing USEPA Test Method 8260 for target volatile organic analytes, USEPA Test Method 8270 for target base-neutral semi-volatile organic analytes and USEPA Test Method 6010 for priority pollutant inorganic analytes. The data quality objectives for the analysis of this sample will be consistent with those outlined under the final FRI Work Plan. The open excavation will be backfilled with clean fill (sand) to grade and restored. The contaminated media will be transported by a licensed waste hauler to an approved waste disposal facility. In addition, the secondary underground injection well, identified as UIW-002 during the FRI activities, will be backfilled with clean fill (sand) to grade and restored to meet local compliance requirements. The results of the endpoint sampling and analysis plan will be presented in the FRI report.

### 3.4 Solid Waste Management

#### *3.4.1 Estimation of Contaminated Media Volume*

The estimated volume of contaminated media at the pollution source was used as a determining factor for the feasibility of selecting a remedial alternative. The following table provides an estimation of the volume of contaminated soil based on performance of the FRI activities at the Site pollution source.

| Pollution Source | Area | Depth | In-Place Estimated Volume of Contaminated Media |
|---|---|---|---|
| UIW-001 | 50 $ft^2$ | 5 ft | Soil - 250 $ft^3$ |

#### *3.4:2 Transport and Disposal*

The selection of the waste disposal facilities for the contaminated soil will be determined by the analysis of representative samples from the pollution source for waste classification prior to disposal. The two general types of waste classifications are hazardous and non-hazardous waste. The following presents the selected waste disposal facilities corresponding to the waste classification (to be determined) of the contaminated media.

If the solid waste media from the pollution source is classified as a hazardous F-waste, it will be handled pursuant to Title 6 NYCRR Part 371 and EPA 40 CFR 261 regulations, transported with waste manifests and disposed in accordance with Title 6 NYCRR Part 360 regulations. Solid waste classified as a hazardous waste shall be transported to and disposed of at the following disposal facility:

Horizon Environmental, Inc.
120 Route 155
Grandes-Piles (Champlain), Canada
USEPA ID Number NYR000078964

If the solid waste media from the pollution source is classified as a non-hazardous waste, it will be handled, transported with waste charters and disposed in accordance with Title 6 NYCRR Part 371 and EPA 40 CFR 261 Criteria. Solid waste classified as a non-hazardous waste shall be transported to and disposed of at the following disposal facility:

RGM, Inc.
972 Nicolls Road
Deer Park, New York

## 4. HEALTH AND SAFETY PLAN

This Health and Safety Plan (HASP) describes the procedures to be followed in order to reduce employee exposure to potential health and safety hazards that may be present at the project site. The emergency response procedures necessary to respond to such hazards are also described within this HASP. All activities performed under this HASP comply with Occupational Safety and Health Administration (OSHA) Regulations 29 CFR Parts 1910, 1925 and 1926 as amended.

### 4.1 Purpose

This Health and Safety Plan is required according to OSHA 29 CFR 1910.120. The purpose of this HASP is to provide the contractor's field personnel, subcontractors, and other visitors with an understanding of the potential chemical and physical hazards that exist or may arise while the tasks of this project are being performed.

The primary objective is to ensure the well being of all field personnel and the community surrounding this site. In order to accomplish this, project staff and approved subcontractors shall acknowledge and adhere to the policies and procedures established herein. Accordingly, all personnel assigned to this project shall read this HASP to certify that they have read, understood, and agree to abide by its provisions.

The contractor's personnel have the authority to stop work performed by our sub-contractors at this site if said work is not performed in accordance with the requirements of this HASP.

### 4.2 Contaminants of Concern

The following organic chemical analytes are present or have the potential to be present in the soil at the Site.

- 1,1,2,2-tetrachloroethane

- Vinyl Chloride
- Cis-1,2-dichloroethylene
- Trans-1,2-dichloroethylene
- Trichloroethylene
- Tetracholoroethene
- 1,1,1-trichloroethane
- 1,1,2-trichloroethane
- 1,1-dichloroethane
- 1,2-dichloroethane
- 1,1,1,2-tetrachloroethane
- Benzene

### 4.3 Amendments

This plan is based on an initial assessment of health and safety risks associated with the site. The plan will be updated as additional information is obtained regarding the nature and extent of on-site contamination and the associated health and safety risks. Any changes in the scope of work of this project and/or site conditions must be amended in writing and approved by the Regional Health and Safety Manager.

### 4.4 Key Personnel / Identification of Health & Safety Personnel

#### *4.4.1 Key Personnel*

A list of the pertinent personnel authorized to be present on site is as follows:

| Title | Name | Telephone Number |
|---|---|---|
| Project Manager | Jim Allen | (631) 269-8800 |
| Field Operations Leader | Richard Parrish | (631) 269-8800 |
| Site Health and Safety Officer | Kristin Scroope | (631) 269-8800 |

| | | |
|---|---|---|
| Quality Assurance Officer | Kevin Kleaka | (631) 269-8800 |
| Site Contact | Jim Allen | (631) 269-8800 |
| State Agency Contact (NYSDEC) | Joe Jones | (518) 402-9621 |

## 4.5 Organizational Responsibility

### *4.5.1 Project Manager*

The Project Manager will be responsible for implementing the project and obtaining any necessary personnel or resources for the completion of the project.

Specific duties will include:

- Coordinating the activities of all subcontractors, to include informing them of the required PPE and insuring their signature acknowledging this Site Safety Plan;
- Selecting a Site Health and Safety Officer and field personnel for the work to be undertaken on site;
- Ensuring that the tasks assigned are being completed as planned and on schedule;
- Providing authority and resources to ensure that the Site Health and Safety Officer is able to implement and manage safety procedures;
- Preparing reports and recommendations about the project to clients and affected personnel;
- Ensuring that all persons allowed to enter the site (i.e., EPA, contractors, state officials, visitors are made aware of the potential hazards associated with the substances known or suspected to be on site, and are knowledgeable as to the on-site copy of the specific site safety plan;
- Ensuring that the Site Health and Safety Officer is aware of all of the provisions of this site safety plan and is instructing all personnel on site about the safety practices and emergency procedures defined in the plan;
- Ensuring that the Site Health and Safety Officer is making an effort to monitor site safety, and has designated a Field Operations Leader to assist with the responsibility when necessary.

### *4.5.2 Field Operations Leader*

The Field Operations Leader will be responsible for field operations and safety. Specific duties will include, but are not limited to:

- Managing field operations;
- Executing the work plan and schedule;
- Enforcing safety procedures;
- Coordinating with the Site Health and Safety Officer in determining protection levels;
- Enforcing site control;
- Documenting field activities, including sample collection;
- Serving as liaison with public officials where there is no Public Affairs official designated.

In the event that the Project Manager and the Site Health and Safety Officer are not on site, the Project Field Manger will assume all responsibility of the Site Health and Safety Officer.

### *4.5.3 Site Health and Safety Officer*

The Site Health and Safety Officer shall be responsible for the implementation of the site safety plan on site. Specific duties will include:

- Monitoring the compliance of field personnel for the routine and proper use of the PPE that has been designated for each task;
- Routinely inspecting PPE and clothing to ensure that it is in good condition and is being stored and maintained properly;
- Stopping work on the site or changing work assignments or procedures if any operation threatens the health and safety of workers or the public;
- Monitoring personnel who enter and exit the site and all controlled access points.
- Reporting any signs of fatigue, work-related stress, or chemical exposures to the Project Manager;
- Dismissing field personnel from the site if their actions or negligence endangers themselves, co-workers, or the public, and reporting the same to the Project Manager;
- Reporting any accidents or violations of the site safety plan to the Project Manager and

documenting the same for the project in the records;

- Knowing emergency procedures, evacuation routes, and the telephone numbers of the ambulance, local hospital, poison control center, fire and police departments;
- Ensuring that all project-relating personnel have signed the personnel agreement and acknowledgments form contained in this site safety plan;
- Coordinate upgrading and downgrading PPE as necessary due to changes in exposure levels, monitoring results, weather, and other site conditions;
- Perform air monitoring with approved instruments in accordance with requirements stated in this Site Safety Plan.

### *4.5.4 Quality Assurance Officer*

The Quality Assurance Officer (QAO) is an employee of the same consulting firm generating the work plan and acts in conjunction with the project manager to develop a site-specific quality assurance plan. The QAO must not have another position on the project, such as a project or task manager, that involves project productivity or profitability as job-performance criteria.

The QAO will assist the project manager in the development of the sampling and analytical portion of the Quality Assurance Project Plan. The QAO or his/her designee shall conduct periodic field and sampling audits, interface with the analytical laboratory to make requests and resolve problems, interface with the data validator and develop a project-specific data usability report.

### *4.5.5 Field Personnel*

All field personnel shall be responsible for acting in compliance with all safety procedures outlined in the Site Safety Plan. Any hazardous work situations or procedures should be reported to the Site Safety Officer so that corrective steps can be taken.

## 4.6 Task / Operation Health and Safety Risk Analysis

The field tasks covered by the HASP may include well installation, development, gauging, and bailing; soil & groundwater handling/sampling; and confined space (excavation) entry and job task hazards. The following hazards may be encountered:

## 4.7 Oxygen Deficiency

Oxygen deficiency may result from the displacement of oxygen by another gas, or the consumption of oxygen by a chemical reaction.

### *4.7.1 Organic Vapors*

The inhalation of volatile organic vapors during all operations can pose a potential health hazard. Hazard reduction procedures include monitoring the ambient air with a flame ionization detector (FID) and the use of appropriate Personal Protective Equipment (PPE). Workers should stand upwind of the source of contamination whenever possible.

## 4.8 Explosion and Fire

The following are possible fire and explosion hazards that may be encountered on the job site and fire preventive measures to take.

### *4.8.1 Flammable Vapors*

The presence of flammable vapors can pose a potential fire and health hazard. Hazard reduction procedures include monitoring the ambient air with an oxygen/LEL meter (combustible gas indicator). If the LEL reading exceeds 20%, leave the site immediately and contact the fire department.

#### *4.8.2 High Oxygen Levels*

Atmospheres that contain a level of oxygen greater than 23% pose an extreme fire hazard (the usual ambient oxygen level is approximately 20.5%). This hazard can be compounded by the fact that vapors associated with this site are highly flammable. All personnel encountering atmospheres that contain a level of oxygen greater than 23% must evacuate the site immediately and must notify the Fire Department. If the oxygen level is less than 19.5%, do not enter the space without level B PPE.

#### *4.8.3 Fire Prevention*

- During equipment operation, periodic vapor concentration measurements should be taken with an explosimeter or combustimeter. If at any time the vapor concentrations exceed 20% of the LEL, then the Site Safety Officer or designated field worker should immediately shut down all operations.
- Only approved safety cans will be used to transport and store flammable liquids.
- All gasoline and diesel-driven engines requiring refueling must be shut down and allowed to cool prior to filling.
- Smoking is not allowed during any operations within the work area in which petroleum products or solvents in free-floating, dissolved, or vapor forms, or other flammable liquids may be present.
- No open flame or spark is allowed in any area containing petroleum products or other flammable liquids.

### 4.9 Operational Safety Hazards

#### *4.9.1 Heavy Machinery / Equipment*

All site employees must remain aware of those site activities that involve the use of heavy equipment and machinery. Respiratory protection and protective eyewear may be worn frequently during site activities. This protective equipment significantly reduces peripheral vision of the wearer. Therefore, it is essential that all employees at the site exercise extreme caution during operation of equipment and machinery to avoid physical injury to themselves or others.

### *4.9.2 Vehicular Traffic*

All employees will be required to wear a fluorescent safety vest at all times while on site. In addition, supplemental traffic safety equipment use can be exercised when warranted by specific task. Supplemental equipment can be items such as cones, flags, barricades, and/or caution tape.

## 4.10 Noise Hazards

Requirements set forth in the OSHA Hearing Conservation Regulation (OSHA 1910.95) shall be adhered to during work on-site. Hearing protection shall be provided to the employees where sound pressure levels exceed 85 dB. Hearing protection shall be worn where sound pressure levels in areas and/or on equipment exceeds 90 dB. Typical drilling operations have been monitored with a sound level meter and indicate that hearing protection is required for all personnel while engaged in this action.

## 4.11 Well Installation, Development, Gauging and Bailing Hazards

Skin and eye contact with contaminated groundwater and/or soil may occur during these tasks. Nitrile gloves and approved safety glasses must be worn.

## 4.12 Soil & Groundwater Sampling Hazards

Skin and eye contact with contaminated groundwater and/or soil may occur during these tasks. Nitrile gloves and approved safety glasses must be worn.

### 4.13 Sample Preservation Hazards

When hydrochloric acid is used, skin and eye contact can occur. This hazard can be reduced with the use of Nitrile gloves and safety glasses. Safety goggles should be worn if there is a potential for a splash hazard.

### 4.14 Equipment Cleaning Hazards

Skin and eye contact with methanol, "Alconox", or other cleaning substances can occur while decontaminating equipment. This hazard can be reduced with the use of Nitrile gloves and safety glasses.

### 4.15 Heat Exposure Hazards

Since climatic changes cannot be avoided, work schedules will be adjusted to provide time intervals for intake of juices, juice products, and water in an area free from contamination and in quantities appropriate for fluid replacement to prevent heat stress conditions from occurring.

#### *4.15.1 Types of Heat Stress*

Heat stress may occur even in moderate temperature areas and may present any or all of the following:

##### *4.15.1.1 Heat Rash*

Result of continuous exposure to heat, humid air, and chafing clothes. Heat rash is uncomfortable and decreases the ability to tolerate heat.

##### *4.15.1.2 Heat Cramps*

Result of the inadequate replacement of body electrolytes lost through perspiration. Signs include severe spasms and pain in the extremities and abdomen.

#### *4.15.1.3 Heat Exhaustion*

Result of increased stress on the vital organs of the body in the effort to meet the body's cooling demands. Signs include shallow breathing; pale, cool, moist skin; profuse sweating; and dizziness.

#### *4.15.1.4 Heat Stroke*

Result of overworked cooling system. Heat stroke is the most serious form of heat stress. Body surfaces must be cooled and medical help must be obtained immediately to prevent severe injury and/or death. Signs include red, hot, dry skin, absence of perspiration, nausea, dizziness and confusion, strong, rapid pulse, coma, and death.

### *4.15.2 Heat Stress Prevention*

A. Replace body fluids (water and electrolytes) lost through perspiration. Solutions may include a 0.1% salt and water solution or commercial mixes such as "Gatorade". Employees must be encouraged to drink more than the amount required in order to satisfy thirst.

B. Use cooling devices to aid the natural body ventilation. Cooling occurs through evaporation of perspiration and limited body contact with heat-absorbing protective clothing. Utilize fans and air conditioners to assist in evaporation. Long, cotton underwear is suggested to absorb perspiration and limit any contact with heat-absorbing protective clothing (i.e., coated Tyvek suits).

C. Conduct non-emergency response activities in the early morning or evening during very hot weather.

D. Provide shelter against heat and direct sunlight to protect personnel. Take breaks in shaded areas.

E. Rotate workers utilizing protective clothing during hot weather.

F. Establish a work regime that will provide adequate rest periods, with personnel working in shifts.

## 4.16 Cold Exposure Hazards

Work schedules will be adjusted to provide sufficient rest periods in a heated area for warming up during operations conducted in cold weather. Also, thermal protective clothing such as wind and/or moisture resistant outerwear is recommended to be worn.

If work is performed continuously in the cold at or below -7 °C (20 °F), including wind chill factor, heated warming shelters (tents, cabins, company vehicles, rest rooms, etc.) shall be made available nearby and the worker should be encouraged to use these shelters at regular intervals, the frequency depending on the severity of the environmental exposure. The onset of heavy shivering, frostnip, the feeling of excessive fatigue, drowsiness, irritability, or euphoria, are indications for immediate return to the shelter. When entering the heated shelter, the outer layer of clothing shall be removed and the remainder of the clothing loosened to permit sweat evaporation. A change of dry work clothing shall be provided as necessary to prevent workers from returning to their work with wet clothing.

Dehydration, or the loss of body fluids, occurs in the cold environment and may increase the susceptibility of the worker to cold injury due to a significant change in blood flow to the extremities. Warm sweet drinks and soups should be provided at the work site to provide caloric intake and fluid volume. The intake of coffee should be limited because of a diuretic and circulatory effect (Adapted from TLV's and Biological Exposure Indices 1988-1989, ACGIH).

## 4.17 Personnel Training

All personnel assigned to the project site should have completed an initial 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training course, health and safety training course, and a current eight-hour refresher course (as required annually after initial 40-hour training completion). Personnel assigned to the site should also have a minimum of three days of field experience under direct supervision of a trained, experienced person.

### 4.18 Site Supervisors Training

On-site managers and supervisors directly responsible for employees engaged in hazardous waste operations have received an additional eight hours of supervisory training. These training requirements comply with the OSHA Hazardous Waste Operations and Emergency Response Regulation, 29 CFR 1910.120.

The project Quality Assurance Officer (QAO) must have a minimum of a bachelor's degree in chemistry or natural science with a minimum of 20 hours in chemistry. The QAO must be proficient in analytical methodology, data interpretation and validation, the development of sampling plans, quality control procedures, and auditing techniques. Because on-site work may be necessary, verification or completion of the 40-hour OSHA safety training course and 8-hour refresher is required.

### 4.19 On-Site Training Program

The site safety supervisor will conduct an on-site training meeting for all personnel and observers who will be involved in the various project operations before they are permitted to participate in any site activities. Training meetings will be provided routinely for any new project personnel. This program will cover specific health and safety equipment and protocols and potential problems inherent to each project operation. No one will be allowed to work on the project site in restricted areas (e.g., waste excavation / handling / processing) unless he/she has attended a project training meeting.

The HASP will be reviewed during the meeting. Copies of the HASP will be distributed to all attending and will be kept available for reference in the field office for the project duration.

### 4.20 Personal Protective Equipment

The purpose of personal protective clothing and equipment (PPE) is to shield or isolate individuals from the chemical, physical, and biological hazards that may be encountered on-site when engineering and other controls are not feasible or cannot provide adequate protection. Careful selection and use of adequate PPE should protect the health of all on-site workers. No single combination of PPE is capable of protecting against all hazards. Therefore, PPE should be used in conjunction with, not in place of, other protective methods, such as engineering controls and safe work practices.

The following is a breakdown of the types of protective clothing and equipment to be used during the site activities. Personal protective equipment is in conformance with EPA criteria for Level B, C, and D protection.

## 4.21 Levels of Protection

Site Specific chemicals of Concern are Benzene, MTBE, Tetrachloroethene, Toluene, Trans 1,2 Dichloroethane, Trichloroethene, Xylene(s), and Vinyl Chloride. These chemicals are of moderate to low hazard. Therefore, modified level D personal protective equipment will be required at all times when on site.

The Site Safety Officer will determine whether or not a level of protection can be upgraded or downgraded. Changes in the level of protection will be recorded in the dedicated site logbook along with the rationale for the changes.

### *4.21.1 Level D Personal Protective Equipment*

All initial site access and activities will be done in Level D attire. Level D protection is sufficient under conditions where no contaminants are present or those activities that do not pose a potential threat of unexpected inhalation of or contact with hazardous levels of any substances. Typical Level D activities may include sediment, logging and groundwater sampling, as well as surficial site surveys.

Level C protection equipment should be readily available at all times. Consistent with OSHA training, prior to donning Level C, oxygen percent must be continuously monitored.

- Hard hat
- Safety glasses

• Steel toe and shank boots

• Fluorescent vest

• Splash goggles

• Hearing protection (as appropriate)

*4.21.2 Modified Level D Personal Protective Equipment*

• Hard hat

• Safety glasses

• Steel toe and shank boots

• Fluorescent vest

• Nitrile "N-Dex" inner gloves

• Latex outer boots (chemical resistant)

• Splash goggles

• Polyethylene coated Tyvek suit

• Hearing protection (as appropriate)

*4.21.3 Level C Personal Protective Equipment*

Level C protection, as described in this plan, will be available at a minimum for those activities that involve surface and subsurface soil (strata disturbance such as well installation, and all subsurface media sampling activities such as split-spoon sampling and borings).

• Buddy system required at all times

• Full-face respirator with NIOSH approved OV/AG/HEPA combination cartridges (MSA GMC-H)

• Saranex coated Tyvek Suit

• Inner Nitrile "N-Dex" gloves

• Outer Nitrile (NBR) gloves

• Steel toe and shank boots

• Outer boots (chemical resistant)

- Hard hat
- Hearing protection (as appropriate)

*4.21.4 Level B Personal Protective Equipment*

Some activities may require Level B protection. In atmospheres potentially containing toluene and xylenes, the protective ensemble should include chemical resistant clothing since the two compounds have skin absorption potential.

Regional Health and Safety representatives must be on site upon start-up of <u>any</u> project requiring level B protection. This should be understood to include subcontractors conducting Level B activity.

- Buddy system required at all times
- Supplied air respirator or SCBA
- Saranex coated Tyvek Suit
- Inner Nitrile "N-Dex" gloves
- Outer Nitrile (NBR) gloves
- Steel toe and shank boots
- Outer boots (chemical resistant)
- Hard hat
- Hearing protection (as appropriate)

**4.22 Personal Use Factors and Equipment Limitations**

Prohibitive or precautionary measures should be taken as necessary to prevent workers from jeopardizing safety during equipment use.

All respiratory protective equipment used will be approved by NIOSH/MSHA. Respirator cartridges will be changed once per day at a minimum. This can be accomplished at the end of the workday during respirator decontamination. If odor breakthrough is detected while wearing the respirator or if breathing becomes difficult, change cartridges immediately.

When utilizing protective garments such as Tyvek suits, gloves, and booties, all seams between protective items will be sealed with duct tape.

Contact with contaminated surfaces, or surfaces suspected of being contaminated, should be avoided. This includes walking through, kneeling in, or placing equipment in puddles, mud, discolored surfaces, or on drums and other containers.

Eating, smoking, drinking, and/or the application of cosmetics in the immediate work area is prohibited. Ingestion of contaminants or absorption of contaminants into the skin may occur.

The use of contact lenses on the job site is strongly advised against. Contact lenses may trap contaminants and/or particulate between the lens and eye, causing irritation. However, when glasses are not available, contact lenses are preferred over faulty vision. When contact lenses are worn, safety glasses and/or goggles must be worn at all times while on the job site. Wearing contact lenses with a respirator in a contaminated atmosphere is prohibited under 29 CFR §1910.134(e)(5)(iii).

### 4.23 Medical Surveillance Requirements

A baseline physical examination should be conducted on all employees before they are permitted to engage in sampling, cleanup, and remedial action work. A complete medical survey should be completed on each employee upon start of employment. Yearly re-examination should be performed to update information on employee health status. Additional re-evaluation will be considered in the event of a chemical overexposure. These medical surveillance requirements shall comply with OSHA regulations as defined in 29 CFR 1910.120.

### 4.24 Periodic Monitoring

*4.24.1 Heat Stress Monitoring*

Heat stress may occur even in moderate temperatures and may present heat rash, heat cramps, heat exhaustion, and/or heat stroke.

Monitoring procedures should be implemented to prevent heat stress arising from environmental conditions, use of PPE, and/or intensity of workload.

For temperatures above 70 °F, the following regime shall be followed for workers wearing permeable coveralls:

| Adjusted Temperature | Normal Ensemble | Impermeable Ensemble |
|---|---|---|
| 90 °F or above | After 45 min. of work | After 15 min. of work |
| 87.5 to 90 °F | After 60 min. of work | After 30 min. of work |
| 82.5 to 87.5 °F | After 90 min. of work | After 60 min. of work |
| 77.5 to 82.5 °F | After 120 min. of work | After 90 min. of work |
| 72.5 to 77.5 °F | After 150 min. of work | After 120 min. of work |

Workers wearing semi-permeable or impermeable encapsulating protective clothing should be monitored for heart rate and temperature when the temperature in the work area is above 70 °F. In order to monitor the worker, measure:

A. Heart rate - Count the radial pulse during a 30-second period as early as possible in the rest period. If the heart rate exceeds 110 beats per minute at the beginning of the rest period, shorten the next work cycle by one-third.

B. Oral temperature - Use a clinical thermometer or similar device to measure the oral temperature at the end of the work period (before drinking). If oral temperature exceeds 99.6 °F, shorten the next work cycle by one-third.

Do not permit a worker to wear a semi-permeable or impermeable garment if the core body temperature exceeds 100.6 °F.

Workers shall not be required to continue working if they feel any of the symptoms of heat stress. Rest periods should be a minimum of 15 minutes. Length of rest period should be extended as appropriate or as recommended by the Site Safety Officer or alternate.

## 4.25 Frequency and Types of Air Monitoring / Sampling

During drilling, excavation, and sampling, the air in work areas will be sampled periodically for the presence of contaminants. Levels of organic vapors in the ambient air will be monitored during the fieldwork to ensure that appropriate levels of respiratory protection are employed at all times.

Site Specific chemicals of Concern are Benzene, Tetrachloroethene, Toluene, Trans 1,2 Dichloroethane, Trichloroethene, Xylene(s), and Vinyl Chloride. These chemicals are of moderate to low hazard.

### *4.25.1 Volatile Organic Compounds*

A member of the field investigation team will use a real-time, organic vapor instrument to monitor the concentration of volatile organic compounds (VOCs) in the air in the work areas, and will determine when changes in levels of respiratory protection required are necessary. No changes in the levels of respiratory protection specified above will be made without the approval of the site safety supervisor and the project team leader.

### *4.25.2 Detection Equipment*

During the investigation of the project site, the site workers will use a photoionization detector (PID) to monitor levels of organic vapor in the air and verify that they are within the safety guidelines established by the preliminary assessment of the risks associated with site investigations. The measured readings will be recorded in a vapor-monitoring sheet (See Appendix F). The following information will be recorded in the field notebook:

- Instrument type
- Control settings
- Reading locations
- Atmospheric conditions

All air monitoring results should be logged in the Site Safety Log.

*4.25.2.1 Ionization Detector Response*

| *Flame Ionization Detector (FID)* | |
|---|---|
| **Concentrations (in ppm)** | **Level of PPE Required** |
| 0.0 to 5.0 | Level D |
| 5.0 to 250.0 | Level C |
| 250.0 to 750.0 | Level B |
| Above 750.0 | Immediately withdraw from the area |

### 4.26 Site Control Measures

Site personnel will employ the buddy system when working under certain circumstances, such as enclosed spacing. Under the buddy system, each site worker is responsible for monitoring the well being of another worker. No one will work alone when the buddy system is implemented. At no time will fewer than two employees be present at the site if activities are underway.

### 4.27 Site Communications Plan

Mobile telephone and/or two-way radios will be used to communicate between the work parties on the site. The following standard hand signals will be used in case of failure of radio communication:

| | |
|---|---|
| Hands on top of head: | Need assistance |
| Thumbs up: | OK, I am alright, I understand |
| Thumbs down: | No, Negative |

Personnel in the Contaminated Zone should remain in constant radio communication or within sight of the project team leader. Any failure of radio communication will require the team leader to evaluate whether personnel should leave the zone.

### 4.28 Work Zone Definition

Work and support areas shall be established based on ambient air data and proposed work sites. They shall be established in order to contain contamination within the smallest areas possible and shall ensure that each employee has the proper PPE for the area or zone in which work is to be performed.

#### *4.28.1 Exclusion Zone (EZ)*

It is within this zone that the work activities are performed. No one shall enter this zone unless the appropriate PPE is donned.

#### *4.28.2 Contaminant Reduction Zone (CRZ)*

It is within this zone that the decontamination process is undertaken. Personnel and their equipment must be adequately decontaminated before leaving this zone for the support zone. This zone will be set up between the EZ and a well-ventilated open area.

#### *4.28.3 Support Zone (SZ)*

The support zone is considered to be uncontaminated; as such, protective clothing and equipment are not required but should be available for use in emergencies. All equipment and materials are stored and maintained within this zone. Protective clothing is put on in the SZ before entering the CRZ. The SZ will be established in a safe environment.

## 4.29 Safe Work Practices

### *4.29.1 Safety Practices / Standing Orders*

The following are important safety precautions that will be enforced during work activities.

1. Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in any area designated as contaminated.
2. Hands and face must be thoroughly washed upon leaving the work area and before eating, drinking, or any other activity.
3. Whenever decontamination procedures for outer garments are in effect, the entire body should be thoroughly washed as soon as possible after the protective garments are removed.
4. No excessive facial hair that interferes with the effectiveness of a respirator will be permitted on personnel required to wear respiratory protection equipment. The respirator must seal against the face so that the wearer receives air only through the air purifying cartridges attached to the respirator. Fit testing shall be performed prior to respirator use to ensure the wearer obtains a proper seal.
5. Contact with potentially contaminated surfaces should be avoided whenever possible. One should not walk through puddles; kneel on the ground; lean, sit, or place equipment on drums, containers, vehicles, or the ground.
6. Medicine and alcohol can potentate the effect from exposure to certain compounds. Prescribed drugs and alcoholic beverages should not be consumed by personnel involved in the project.
7. Personnel and equipment in the work areas should be minimized, consistent with effective site operations.
8. Work areas for various operational activities should be established.
9. Procedures for leaving the work area must be planned and implemented prior to going to the site. Work areas and decontamination procedures must be established on the basis of prevailing site conditions.

10. Respirators will be issued for the exclusive use of one worker and will be cleaned and disinfected after each use.
11. Safety gloves and boots shall be taped to the disposable, chemical-protective suits as necessary.
12. All unsafe equipment left unattended will be identified by a "DANGER, DO NOT OPERATE" tag.
13. Noise mufflers or earplugs may be required for all site personnel working around heavy equipment. This requirement will be at the discretion of the Site Safety Officer. Disposable, form-fitting plugs are preferred.
14. Cartridges for air-purifying respirators in use will be changed daily at a minimum.

### 4.30 Decontamination Plan

Personnel involved in work activities at the site may be exposed to compounds in a number of ways, despite the most stringent protective procedures. Site personnel may come in contact with vapors, gases, mists, or particulates in the air, or other site media while performing site duties. Use of monitoring instruments and site equipment can also result in exposure and transmittal of hazardous substances.

In general, decontamination involves scrubbing with a detergent water solution followed by clean water rinses. All disposable items shall be disposed of in a dry container. Certain parts of contaminated respirators, such as harness assemblies and leather or cloth components, are difficult to decontaminate. If grossly contaminated, they may have to be discarded. Rubber components can be soaked in detergent and water and scrubbed with a brush. In addition to being contaminated, all respirators, non-disposable protective clothing, and other personal articles must be sanitized or replaced before they can be used again if they become soiled from exhalation, body oils, and perspiration. The manufacturer's instructions should be followed in sanitizing the respirator masks.

The Site Safety Officer will be responsible for the proper maintenance, decontamination, and sanitizing of all respirator equipment.

The decontamination zone layout and procedures should match the prescribed levels of personal protection.

The following procedures have been established to provide site personnel with minimum guidelines for proper decontamination. Personnel leaving the point of operations designated as the EZ must follow these minimum procedures. The decontamination process shall take place at a reasonable distance away from any area of potential contamination.

### 4.31 Minimum Decontamination Procedure

Personnel leaving the point of operations should wash outer gloves and boots. At a minimum, the outer boots shall be removed first and stored in an appropriate area or disposed of properly. Outer boots must be properly washed where gross contamination is evident. Personnel shall then remove and dispose of the Tyvek suits. Personnel should remove the Tyvek suits so that the inner clothing does not come in contact with any contaminated surfaces. After Tyvek removal, personnel shall remove and discard outer Nitrile gloves. Personnel shall then remove the respirator, where applicable. Respirators shall be disinfected between uses with towelettes or other sanitary methods. Potable water, at a minimum, will be present so that site personnel can thoroughly wash hands and face after leaving the point of operations.

Portable wash stations shall be utilized for easy and efficient access. The wash station shall consist of a potable water supply, hand soap, and clean towels. Portable sprayer units filled with Alconox solution and potable water should also be available to wash and rinse off grossly contaminated boots, gloves, and equipment. The Site Safety Officer will monitor decontamination procedures to ensure their effectiveness. Modifications of the decontamination procedure may be necessary as determined by the Site Safety Officer's observations.

### 4.32 Standard Decontamination Procedure

The following decontamination procedures should be implemented during site operations for the appropriate level of protection.

*4.32.1 Level B*

| | |
|---|---|
| **Segregated equipment drop** | Deposit equipment (tools, sampling devices, notes, monitoring instruments, radios, etc.) used on the site onto plastic drop cloths. |
| **Boot covers and glove wash** | Outer boots and outer gloves should be scrubbed with a decontamination solution of detergent and water or replaced. |
| **Rinse off boot covers and gloves** | Decontamination solution should be rinsed off boot covers and gloves using generous amounts of water. Repeat as many times as necessary. |
| **Tape removal** | Remove tape from around boots and gloves and place into container with plastic liner. |
| **Boot cover removal** | Remove disposable boot covers and place into container with plastic liner. |
| **Outer glove removal** | Remove outer gloves and deposit in container with plastic liner. |
| **Suit / safety boot wash** | Completely wash splash suit, SCBA, gloves, and safety boots. Care should be exercised that no water is allowed into the SCBA regulator. It is suggested that the SCBA regulator be wrapped in plastic. |
| **Suit / safety boot rinse** | Thoroughly rinse off all decontamination solution from protective clothing. |
| **Tank or canister changes** | This is the last step in the decontamination procedure for those workers wishing to change air tanks and return to the EZ. The worker's air tank or cartridge is exchanged, new outer glove and boot covers are donned, and joints taped. |
| **Removal of safety boots** | Remove safety boots and deposit in container with a plastic liner. |
| **SCBA backpack removal** | Without removing the face piece, the SCBA backpack should be removed and placed on a table. The face piece should then be disconnected from the remaining SCBA unit and then proceed to |

| | |
|---|---|
| | the next station. |
| **Splash suit removal** | With care, remove the splash suit. The exterior of the splash suit should not come in contact with any inner layers of clothing. |
| **Inner glove wash** | The inner gloves should be washed with a mild decontamination solution (detergent / water). |
| **Inner glove rinse** | Generously rinse the inner gloves with water. |
| **Face piece removal** | Without touching the face with gloves, remove the face piece. The face piece should be deposited into a container that has a plastic liner. |
| **Inner glove removal** | Remove the inner glove and deposit into a container that has a plastic liner. |
| **Field wash** | Wash hands and face thoroughly. If highly toxic, skin corrosive, or skin absorbent materials are known or suspected to be present, a shower should be taken. |

#### *4.32.2 Level C and Level D*

The decontamination procedure for Level C and Level D personal protection will employ applicable steps detailed in the Level B decontamination process.

### 4.33 Sampling Equipment and Sample Container Decontamination

All non-disposable sampling equipment will be decontaminated with an Alconox / water solution followed by a clean water rinse. As an added precaution against cross-contamination, all non-disposable sampling equipment will be rinsed with distilled water. All disposable sampling equipment will be properly disposed of in dry containers.

Before leaving the site, all sample containers will be thoroughly decontaminated using a detergent and water solution followed by a clean water rinse. The decontamination procedure should include a complete scrubbing of the container's surface to remove possible contamination. Care must be exercised to prevent damage to sample container identification labels.

### 4.34 Emergency Response / Contingency Plan

In order to properly prepare for emergencies, personal protective equipment (PPE) will be worn by site workers, and first aid equipment will be kept at the site. Material Safety Data Sheets (MSDS) will be maintained for all contaminants that workers may be exposed to.

### 4.35 Contact Information

In the event of an accident or emergency situation, emergency procedures will be executed. Said procedures can and will be executed by the first person to observe an accident or emergency situation. The Project Field Manager will be notified about the situation immediately after emergency procedures are implemented.

#### *4.35.1 Emergency Contacts*

| | | |
|---|---|---|
| *Emergency:* | 911 | |
| *Ambulance:* | 516-572-6655 | Nassau County Medical Center |
| *Hospital:* | 516-572-0123 | Nassau County Medical Center |
| *Local Police Precinct:* | 516-573-5275 | Westbury Police Dept. |
| *State Police:* | 516-756-3300 | New York State Police Department |
| *Fire Department:* | 516-921-0000 | Westbury Fire Dept. |
| *Chemtrec:* | 800-424-9300 | |
| *Poison Control Center:* | 800-336-6997 | |
| *National Response Center:* | 800-424-8802 | |
| *US EPA (24-hour hotline):* | 800-424-9346 | |
| **Directions to Nearest Hospital From Project Site:** Take New York Avenue south and turn left onto Old Country Road. Continue east and turn right onto Carman Ave. Travel approximately two miles south on Carman Ave. and the hospital will be on the left immediately after the Nassau County Jail. | | |

*4.35.2 Utility Emergencies / Initiating Subsurface Investigation Work*

Impact Environmental Consulting, Inc. ("Impact") representatives are responsible for contacting appropriate agencies prior to conducting on-site activities when applicable.

| | | |
|---|---|---|
| *Gas Company:* | 718-643-4050 | Brooklyn Union Gas |
| *Telephone Company:* | 516-661-6000 | Bell Atlantic |
| *Electric Company:* | 516-222-7700 | Marketspan |

### 4.36 Contingency / Evacuation Plan

It may be possible that a site emergency could necessitate the evacuation of all personnel from the site. If such a situation develops, an audible alarm shall be given for site evacuation (consisting of an air horn). Personnel shall evacuate the site in a calm and controlled fashion and regroup at a predetermined location. The route of evacuation will be dependent on wind direction, severity, type of incident, etc.

The site must not be re-entered until back-up help, monitoring equipment, and/or personal protective equipment are on hand and the appropriate regulatory agencies have been notified.

### 4.37 Emergency Medical Treatment Procedures

All injuries, no matter how slight, will be reported to the site safety supervisor immediately. The safety supervisor will complete an accident report for all incidents (Appendix B).

Some injuries, such as severe lacerations or burns, may require immediate treatment. Unless required due to immediate danger, seriously injured persons should not be moved without direction from attending medical personnel.

*4.37.1 Standard Procedures for Injury*

1. Notify the Site Safety Officer, Project Manager, and the Regional Safety Director of all accidents, incidents, and near emergency situations.
2. If the injury is minor, trained personnel should proceed to administer appropriate first aid.
3. Telephone for ambulance/medical assistance if necessary. Whenever possible, notify the receiving hospital of the nature of physical injury or chemical overexposure. If no phone is available, transport the person to the nearest hospital.
4. When transporting an injured person to a hospital, bring this Health and Safety Plan with the attached MSDS to assist medical personnel with diagnosis and treatment.

*4.37.2 Chemical Overexposure*

In all cases of chemical overexposure, follow standard procedures as outlined below for poison management, first aid, and, if applicable, cardiopulmonary resuscitation. Different routes of exposure and their respective first aid/poison management procedures are outlined below.

| | |
|---|---|
| **Ingestion** | Do not induce vomiting unless prompted by a health professional. Transport person to nearest hospital immediately. |
| **Inhalation / Confined Space** | Do not enter a confined space to rescue someone who has been overcome unless properly equipped and a standby person present. |
| **Inhalation / Other** | Move the person from the contaminated environment. Initiate CPR if necessary. Call or have someone call for medical assistance. Refer to MSDS for additional specific information. If necessary, transport the victim to the nearest hospital as soon as possible. |
| **Skin Contact / Non-Caustic** | Wash off skin with a large amount of water immediately. Remove any affected clothing and rewash skin using soap, if |

| | |
|---|---|
| **Contaminant (Petroleum, Gasoline, etc.)** | available. Transport person to a medical facility if necessary. |
| **Skin Contact / Corrosive Contaminant (Acids, Hydrogen Peroxide, etc.)** | Wash off skin with a large amount of water immediately. Remove any affected clothing and rewash skin with water. Transport person to a medical facility if necessary. |
| **Eyes** | Hold eyelids open and rinse the eyes immediately with large amounts of water for 15 minutes. Never permit the eyes to be rubbed. Transport person to a medical facility as soon as possible. |

## 4.38 First Aid for Injuries Incurred During Field Work

A first aid kit and an emergency eyewash will be available on-site. Field crews, when performing field operations, will carry portable first aid kits that include emergency eye wash stations.

### *4.38.1 First Aid Equipment List*

The first aid kit(s) kept at the site will consist of a weatherproof container with individually sealed packages for each type of item.

The kit will include at least the following items:

- Gauze roller bandages, 1-inch and 2-inch
- Gauze compress bandages, 4-inch
- Gauze pads, 2-inch
- Adhesive tape, 1-inch
- Bandage, 1-inch
- Butterfly bandages
- Triangular bandages, 40-inch

- Ampules of ammonia inhalants
- Antiseptic applicators or swabs
- Burn dressing and sterilized towels
- Surgical scissors
- Eye dressing
- Portable emergency eye wash
- Emergency oxygen supply
- Alcohol
- Hydrogen peroxide
- Clinical grade thermometer
- Tourniquet

*4.38.2 Other Emergency Equipment*

One portable fire extinguisher with a rating (ratio) of 20-pound A/B/C and one portable fire extinguisher with a rating of 2A will be conspicuously and centrally located between the restricted and non-restricted zones. In addition, similar extinguishers of the same size and class will be located in the site office trailer so that maximum travel distance to the nearest unit shall not exceed 50 feet. Portable extinguishers will be properly tagged with inspection dates and maintained in accordance with standard maintenance procedures for portable fire extinguishers. Field personnel will be trained in fire extinguisher use before field operations begin.

An emergency at any part of the site, such as fire or chemical release, might require that some appropriately trained site workers direct traffic on or near the site.
The following safety equipment to be used for traffic should be kept readily available on site in the field office:

- reflective/fluorescent vests
- flares
- traffic cones (and flags, or the equivalent, as needed)
- hazard tape (barricades as needed)

- working flashlights

### 4.39 Record of Injuries Incurred On-Site

#### *4.39.1 Occupational Injuries and Illnesses Form (OSHA 200)*

All occupational injuries and illnesses that are required to be recorded under the Occupational Safety and Health Act will be registered on OSHA Form 200 (see Appendix C). The site safety supervisor will record occupational injuries and illnesses within 48 hours of occurrence, as required by statute.

#### *4.39.2 Employer's First Report of Injury*

The site safety supervisor for all accidents involving work injury at the site will complete this form (Appendix D). Follow-up procedures will include investigation of each accident or near miss by the safety supervisor to assure that no similar accidents occur in the future.

### 4.40 Confined Space Entry Procedures

Excavation pits, storage tanks, soil trenches, subsurface vaults, basements, and sheds are examples of confined spaces. Confined spaces can be identified as an area having one of the following characteristics:

- Limited access and egress
- Unfavorable for natural ventilation
- Not designed for continuous human occupancy

Organic and/or combustible vapors may be trapped in confined spaces, resulting in lack of oxygen (anoxia) and/or overexposure to vapors. When site work takes place in a confined space, the air must be monitored for oxygen level, flammable vapors, and toxic vapors. The following air monitoring procedures must be followed before entering a confined space.

### 4.41 Oxygen Level

Monitor for percent oxygen with an oxygen/LEL meter (e.g., CGI) to ensure an oxygen level between 19.5 and 23%. Because of the high vapor density of the contaminants associated with this site, there is a high probability that vapors in the enclosed spaces or vaults will replace any oxygen that is present, even if the space is open to the air. Therefore, oxygen level monitoring will be done at the top, middle, and bottom of the enclosed space to determine if there is a minimum acceptable oxygen level of 19.5% prior to entry. The oxygen/LEL meter is factory-set to sound an alarm at levels less than 19.5% oxygen. If oxygen is less than 19.5% or greater than 23%, do not enter the space.

### 4.42 Explosive Vapors

Monitor the percentage of the Lower Explosive Limit (LEL) with an oxygen/LEL meter to determine whether vapor concentrations within the confined space are within the flammable range. If LEL readings exceed 10%, personnel should exercise extreme caution, use non-sparking tools, and utilize ventilation engineering controls to reduce LEL levels. The oxygen/LEL meter is factory set to sound an alarm at levels greater than 20% LEL. If LEL readings exceed 20%, personnel MUST leave the site immediately and contact the project manager.

### 4.43 Toxic Vapors

Monitor for toxic vapors with a photo ionization detector (PID) to determine whether toxic vapors within the confined space exceed the action levels. PID readings will be taken at the top, middle, and bottom of a vault, shed, or other confined space to determine vapor levels.

### 4.44 Summary

Do not enter the confined space unless:

- The oxygen concentration is between 19.5 and 23%;
- The LEL is less than 20%; and
- FID readings are less than 250 ppm (a respirator must be worn if the readings exceed 5 ppm)

IMPACT ENVIRONMENTAL
a division of impact environmental consulting, inc.

1 VILLAGE PLAZA
KINGS PARK, NEW YORK 11754
631.269.8800 TELEPHONE
631.269.1599 FACIMILE
WWW.IMPACTENVIRONMENTAL.COM

IMPACT
ENVIRONMENTAL

September 30, 2002

Mr. Joe Jones, Project Manger
**New York State Department of Environmental Conservation**
Division of Environmental Remediation
Bureau of Eastern Remedial Action
625 Broadway
Albany, New York 12233-7014

*Re: 36 Sylvester Street, Westbury, New York*
*Order on Consent Index # W1-0863-00-01*
*Site Code # 1-30-043U*

Dear Mr. Jones:

This letter serves as a progress report prepared with regards to the implementation of the Focused Remedial Investigation (FRI) for the above referenced site. This report summarizes the recent activities completed for the FRI.

- The Draft Focused Remedial Investigation Report, dated September 2002, was submitted (attached) to the NYSDEC for review and approval.

Please feel free to contact me with any questions.

Sincerely,
**Impact Environmental**
**Consulting, Inc.**

Kevin Kleaka
Quality Control Officer

Cc: Distribution List
Attachment

**Distribution List:**

Chittababu Vasudevan, P.E., Ph.D. (w/o attachment)
New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Eastern Remedial Action
625 Broadway
Albany, New York 12233-7014

Mr. Gary Litwin (w/o attachment)
Director, Bureau of Environmental Exposure Investigation
New York State Department of Health
Flanigan Square
547 River Street
Troy, New York 12180-2216

Ray Cowan, Regional Director (w/o attachment)
New York State Department of Environmental Conservation
SUNY Stony Brook
Stony Brook, New York 11790

Charlotte Biblow, Esq. (w/ attachment)
Radler & Kremer
EAB Plaza
Uniondale, New York 11556

Paul Merandi (w/ attachment) ✓
Grand Machinery, Inc.
215 Centre Street
New York, New York 10013

# DRAFT

# FOCUSED REMEDIAL INVESTIGATION REPORT

Conducted at:

36 Sylvester Street Site
Site Code 1-30-043U
Westbury, New York

Prepared for:

The New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York

September 2002

IMPACT ENVIRONMENTAL

a division of impact environmental consulting, inc.

1 VILLAGE PLAZA, KINGS PARK, NEW YORK 11754 ❖ 631.269.8800 TELEPHONE ❖ 631. 269.1599 FACSIMILE ❖ IMPACTENVIRONMENTAL.COM

IMPACT ENVIRONMENTAL

DRAFT

# FOCUSED REMEDIAL INVESTIGATION REPORT

Conducted at:

36 Sylvester Street Site
Site Code 1-30-043U
Westbury, New York

Prepared for:

The New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York

September 2002

Jim Allen
*Project Manager*

Kevin C. Kleaka
*Quality Assurance Officer*

## TABLE OF CONTENTS

DRAFT DISTRIBUTION LIST

| *REPORT HOLDERS* | *NUMBER OF REPORTS ISSUED* |
|---|---|
| NYSDEC, Eastern Remediation Division | 1 |
| Grand Machinery Exchange, Inc. | 1 |
| Rivkin Radler, LLP | 1 |
| Impact Environmental Consulting, Inc. Corporate Records | 1 |

# 1. INTRODUCTION

This Draft Focused Remedial Investigation (FRI) report details the implementation and results of investigative and interim remedial activities performed at 36 Sylvester Street, Westbury, New York, herein identified as the "Site". The current owner of the Site is Grand Machinery Exchange, Inc. This FRI report is submitted in accordance with the provisions of the Order on Consent # W1-0863-00-01 between the New York State Department of Environmental Conservation (NYSDEC) and Grand Machinery Exchange, Inc.

The investigative and interim remedial activities described herein were performed in accordance with the NYSDEC approved work plans prepared by Impact Environmental Consulting, Inc., entitled Focused Remedial Investigation, Final Work Plan, July 10, 2000 and Interim Remedial Measures, Final Work Plan, April 2002.

In 1999, the Site was listed on the New York State registry of Inactive Hazardous Waste Disposal Sites (IHWDS) resulting from a NYSDEC investigation. The NYSDEC investigation indicated that the Site was potentially a contributing source of chlorinated organic groundwater contamination. Consequently, the Site was designated as site code 01-30-043U by the NYSDEC. In 2001, Impact Environmental Consulting, Inc. performed FRI activities to identify the nature, source and extent of any contamination at the Site. Specifically, the performance of the FRI was designed to acquire strategic data to confirm or refute the Site as a contributory source of groundwater contamination. An evaluation of the FRI results indicated that the Site is not a contributing source of the regional chlorinated organic groundwater contamination. However, heavy metal related soil contamination was confirmed at isolated areas of the Site that required remedial activities. These confirmed point pollution sources were addressed under the scope of an IRM in May 2002. This FRI report is intended to provide a comprehensive overview of the data generated from this investigation to support final remedial decisions.

## 2. SITE BACKGROUND AND SETTING

### 2.1 Site Location

The Site is located at 36 Sylvester Street, Westbury, New York and is designated by the Nassau County Tax Assessors Office as Section 11, Block 77, Lots 21-24 and 56-59 (see Plate 1). This location is bordered by Sylvester Street to the west, New York Avenue to the east, and is situated between Main Street to the north and Old Country Road to the south. The areal extent of the Site is approximately 20,000 square feet. The Site contains one single-story, masonry building with a footprint of 12,125 square feet. The surface area of the Site consists of asphalt parking areas and concrete walkways. The Site exhibits low topographic relief (one to three percent slopes). Refer to Plate 2.

### 2.2 Site History

A review of local government records under the freedom of information law was conducted to provide information regarding historic Site conditions. This review has revealed the following relevant information regarding the Site.

The Site was initially developed circa 1952 with a one-story, masonry building. The building was improved with an addition onto the eastern portion of the building in June 1953. The footprint of the building was constructed over a majority of the lot, with the exception of alleys on the north and south portions of the Site. The building was historically used for industrial applications that included the manufacturing of precision machinery. Former occupants of the Site included American Express Field Warehousing Corp., Universal Transistor Products Corp. and National Gear Products.

The building interior facilitated plumbing fixtures that included several bathroom sinks and toilets, a slop sink and floor drains. The building was heated with an oil-fired burner system that was installed as part of the original construction. Said system was fueled from exterior underground fuel oil storage tanks. Circa 1991, the oil-fired heating system was converted to a natural gas-fired heating system and the exterior underground fuel oil storage tanks were removed to the satisfaction of the Nassau County Health Department (NCDH). The building was serviced by an on-site sanitary disposal system that consisted of a septic tank and one cesspool at the time of construction. The building was connected to the municipal sewer system in January 1987. On-site chemical storage associated with the operations of previous occupants included cutting and lubricating oils, mineral spirits and waste oils. Presently, the Site is operated by Gel-Tec, a division of Tishcon Corp. The interior of the building is primarily utilized as a warehouse unit by Gel-Tec.

## 2.3 Site Geology and Hydrogeology

### *2.3.1 Subsurface Geology*

The geology of Long Island consists of thick deposits of unconsolidated, water bearing sediments resting upon a relatively impermeable, crystalline bedrock surface. The sequence of events that shaped Long Island's geology is not known with certainty, but it probably began with the formation of the original basement rocks in early Paleozoic to Precambrian time more than 400 million years ago. These basement rocks were heated and compressed (metamorphosed) by folding and faulting, producing a rugged, mountainous topography. During the subsequent period ending with the late Cretaceous Epoch 100 million years ago, erosion reduced the land to a nearly planer surface that gently tilted to the southeast.

During the late Cretaceous Epoch (60-100 million years ago), streams brought sediments from the north and the west to the Long Island area on the continental margin, forming a permeable sand layer (Lloyd Sand Member of the Raritan Formation) and overlying clay member (clay member of the Raritan Formation) upon the bedrock surface. After a short period of erosion or non-deposition, thick, permeable beds of river delta clay, sand, and gravel were deposited on the Raritan Formation; these deposits comprise the Magothy Aquifer. Toward the close of the Late Cretaceous period (approximately 60 million years ago), a sand and clay unit (Monmouth Group) of low permeability was deposited in shallow marine waters in the area that now constitutes Long Island's south shore.

A long period of non-deposition, or possibly deposition followed by erosion, occurred after the Cretaceous era. Geologic activities during this time left few sedimentary traces, but streams flowing across Long Island cut deep valleys into the Magothy. It was not until late Pleistocene (Wisconsinian) glaciation- some 20 to 200 thousand years ago- that there were any significant additions to Long Island's geologic record. Valleys were filled and the other deposits were almost completely buried by glacial deposits. Prior to the southward movement of the Pleistocene ice sheets to Long Island, an extensive clay unit (Gardiners Clay) was deposited in shallow marine and brackish waters along the shores of what is now Suffolk County. This unit rested upon the Magothy and Monmouth Group, and acted as a confining layer. The northern portions of the Gardiners were subsequently eroded by advancing ice and glacial meltwaters, and Gardiners Clay beds are now found only in the south shore area.

In the area of the Site the bedrock exists at an elevation of approximately seven hundred feet below sea level. The top of the Raritan confining unit exists at an elevation of five hundred (500) feet below sea level (Smolensky and Feldman, 1988). The top of the Magothy Aquifer exists at an elevation of approximately 30 feet above sea level. There is no confining layer with extensive horizontal continuity overlying the Magothy Aquifer. In many areas of Westbury and Hicksville there is no confining layer between the Magothy and Glacial Aquifers. They are only differentiated by their hydraulic conductivities (50 vs. 270 ft/day) (Franke and Cohen, 1972). Localized clay lenses are present within this area of the Magothy Aquifer, but their location and extent have not been delineated.

### *2.3.2 Topography*

The Pleistocene glaciation created the hilly Ronkonkoma moraine along Long Island's "spine" and south fork, and the Harbor Hill Moraine along the North shore and the North fork. Erosion of these morainal deposits (as the glacier melted away from Long Island) created extensive outwash plains of sand and gravel in the intermorainal area and south to the Atlantic Ocean. These highly permeable deposits comprise the upper glacial aquifer and represent the majority of Long Island's surficial sediments. Some local confining clay units were also formed from glacial materials in intermorainal lakes and tidal lagoons. Since the end of glaciation, about 12,000 years ago, Holocene beach and marsh deposits have been formed along the marine edge, and within stream corridors and ponds.

The elevation of the Site, as presented on the United States Geologic Survey (USGS), Hicksville Quadrangle Map, approximates one hundred twenty (120) feet above sea level. The USGS Map, which was base dated 1943, field checked in 1967, and photorevised in 1979, did not depict a structure on the Site (the property is within an area in which only landmark buildings were mapped).

### *2.3.3 Soil Component Identification*

Nassau County is divided into ten general soil units, or groups of soils geographically associated in a characteristic repeating pattern, according to the Soil Survey of Nassau County, New York (U.S. Department of Agriculture, U.S. Soil Conservation Service). The general soil component of the Site, as defined by this publication, is the Urban Land Association. This Association consists of dominantly nearly level or gently sloping areas that are covered by buildings, roads, sidewalks, and parking lots on plains and low hills.

The Soil Survey also describes detailed soil units that each represent an area on the landscape consisting of one or more soils for which the unit is named. The detailed component of the Site is identified by this Survey as the Urban Land-Hempstead Complex (Uh). This soil type consists of urbanized areas and very deep, well-drained soils on nearly level plains. Slope ranges from 0 to 3 percent, and slope is less than 2 percent in most of the areas that are not near drainage-ways or depressions.

This unit is described as a soil complex because the urbanized areas and Hempstead soils are so intermingled that it was not practical to classify them separately. This soil complex is made up of about 75 percent urbanized areas, 20 percent Hempstead soils, and 5 percent other soils. The urbanized areas consist of buildings, roads, driveways, parking lots, and other man-made structures.

Typical sequence, depth and composition of the layers of Hempstead Series Soils are as follows:

| Depth In Soil Profile | Soil Description |
|---|---|
| Surface to 11 inches | black silt loam |
| 11 to 15 inches | dark brown silt loam |
| 15 to 29 inches | yellowish brown silt loam |
| 29 to 33 inches | strong brown very gravelly loamy sand |
| 33 to 60 inches or more | very pale brown sand and gravel |

### *2.3.4 Regional Groundwater Characteristics*

The Site lies within Hydrogeologic Zone I, The Deep Flow - Magothy Recharge Area (Nassau-Suffolk 208 Study - Water Management Zones in Nassau and Suffolk). Zone I is characterized by deep groundwater recharge and vertical groundwater flow. Studies have determined that the upper glacial aquifer and magothy aquifer are hydraulically connected (no confining unit). Regional groundwater flow direction in the area of the Site is toward the southwest. The water table is encountered at approximately fifty-five (55) feet below grade.

### *2.3.5 Site-Specific Groundwater Characteristics*

A study performed by Dvirka and Bartilucci Consulting Engineers under contract with the NCDH was reviewed to compile hydrogeologic data in the immediate vicinity of the Site. This study was conducted in 1986 and was prepared specifically for contaminated aquifer segments in Nassau County. This included the acquisition of static water levels measurements in the New Cassell area to create groundwater contour maps. The study revealed that a localized groundwater mound was present in the immediate vicinity of the Site. This local mounding was reported to alter the groundwater flow direction in this area. The groundwater gradient contours indicated that groundwater flow direction would be toward the west.

A study performed by Lawler, Matusky & Skelly Engineers (LMS) under contract with the NYSDEC for the investigation of the New Cassell Industrial Area (NCIA) was also reviewed to further assess the hydrogeologic data in the immediate vicinity of the Site. The study included the acquisition of static water levels measurements in the New Cassell area to create groundwater contour maps. This study also detected a localized groundwater mound in the immediate vicinity of the Site. This mounding was determined to be attributable to a clayey silt deposit. The groundwater contour maps indicated a westerly flow direction in this immediate area.

The property adjacent to the Site is currently operating an air sparge and soil vapor extraction system to mitigate groundwater contaminants. The closest air sparge point is approximately one hundred and twenty (120) feet away from the Site. The design of this system was intended to create a wide radius of influence. This sparge system is creating a localized mounding affect on the water table and is likely altering groundwater flow direction and contaminant migration paths toward the Site.

## 2.4 Historical Investigations

### *2.4.1 New Cassel Industrial Area*

In 1986, the NCDH conducted an investigation of contaminated aquifer segments in Nassau County, New York. This investigation was implemented to identify the most significant sources of groundwater contamination in the County, and to determine the extent and sources of the contamination. Based on the results of data obtained from this investigation, the environmental quality of the groundwater underlying the NCIA was determined to be substantially impaired, and required further study (NCDH, 1986). The aquifers of Long Island are utilized as a sole-source supply of public drinking water. As such, the detected groundwater contamination created a potential threat to the local public drinking water supply wells (Westbury and Bowling Green Water Districts).

As a result of the investigation, the NYSDEC classified the entire NCIA as a Class 2 Inactive Hazardous Waste Disposal Site in 1988. As such, all of the property owners within the NCIA became Potentially Responsible Parties (PRPs). In 1992, LMS were contracted by the NYSDEC to conduct additional investigative activities within the NCIA. The purpose of this investigation was to define the nature and extent of groundwater contaminants beneath the NCIA, identify potential point sources of contamination, and redefine the NCIA according to measured contamination (LMS, 1997). The objectives of this investigation were attained by executing a large-scale subsurface investigation in conjunction with a review of government agency records for individual properties within the NCIA. The information procured from the record review was compiled into a comprehensive database detailing individual property attributes. This included tax map information, addresses, past and current occupants, wastewater discharge history, recorded spills, historic environmental conditions and a historic chemical inventory.

Upon determining suspected contaminant sources, an investigation plan was developed. This plan consisted of the sampling and analysis of soil and groundwater from strategic locations throughout the NCIA. The design and implementation of this plan was to provide data that would delineate contaminant plume characteristics.

The investigation report completed by LMS in 1994 identified several areas exhibiting significant groundwater contamination within the NCIA (LMS, 1994). These contaminated areas were divided into three areas identified as the western, central and eastern sections. Said investigation report indicated that two apparently overlapping contaminant plumes were detected in the western section; three separate contaminant plumes were detected in the central section; and two separate contaminant plumes were detected in the eastern section. This data analysis was necessary to establish a graphical representation of contaminant plume boundaries, that was used to identify suspected contaminant sources. The findings of these investigations were the basis that enabled the NYSDEC to document PRPs associated with properties suspected as contaminant sources or contributors, and to eliminate PRPs within areas exhibiting ambient groundwater quality conditions.

Consequent to documenting a registry of PRPs associated with individual IHWDSs, property owners petitioned to de-list (remove) their properties from the State registry of IHWDS. In response to these requests, the NYSDEC de-listed numerous sites from the registry. However, this agreement was stipulated under the provision that if additional investigations confirmed these properties to be a source of contamination, they would be re-listed (LMS, 1995).

In accordance with the stipulations reserved for PRPs de-listing their properties, the NYSDEC contracted LMS Engineers to conduct additional investigations within the NCIA. These investigations were specifically designed to document a more precise understanding of contaminant sources and plumes than reported in previous investigations. The methods for achieving this information were similar to previous investigations. In addition to a more detailed subsurface investigation, site inspections of individual facilities were conducted to further assess contaminant source potential. These additional investigations are documented in reports dated February 1995 and March 1997. Based on the data obtained from these investigations, a revised registry of facilities was documented. The classifications of these facilities vary depending on their individual status. In conclusion, LMS Engineers recommended that further investigations be conducted in highly contaminated areas, and that IRM be conducted on the identified source areas to remove any continuing source of contamination to the aquifer systems.

*2.4.2 Tishcon Corporation at Brooklyn Avenue*

All of the information presented in this section was compiled from the NYSDEC Proposed Remedial Action Plan, dated January 2000 and NYSDEC Record of Decision, dated January 1998.

Facility operations at this site include the manufacturing of vitamins, dietary supplements and soft gelatin capsules. The facility has been operated since 1982 and has historically used large volumes of 1,1,1-Trichloroethane (1,1,1-TCA) as part of the gelatin capsule manufacturing process. Between 1992 through 1995, over 70,000-gallons of 1,1,1-TCA were purchased for on-site usage in the manufacturing process. Remedial investigations at this facility have confirmed the presence point pollution sources containing significantly elevated concentrations of 1,1,1-TCA, 1,1-DCE and 1,1-DCA. Significantly elevated concentrations of 1,1,1-TCA were detected in cesspools and other drainage structures (underground injection wells or UIWs). The concentrations of 1,1,1-TCA detected in these point pollution sources ranged from 27 μg/Kg or parts per billion (ppb) to 170,000,000 ppb. The pollution sources at this facility were documented to have clearly impacted the groundwater quality at the both the facility and locations hydraulically down-gradient with high levels of volatile organic analytes. These analytes included 1,1,1-TCA. 1,1-DCA and 1,1-DCE, which correspond directly with the target analytes identified in the confirmed pollution sources.

The concentrations of 1,1,1-TCA detected in groundwater at this facility have ranged from 500 μg/L or ppb to 74,000 μg/L. The concentrations of 1,1,-DCE detected in groundwater at this facility have ranged from 58 μg/L or ppb to 1,500 μg/L. The concentrations of 1,1,-DCA detected in groundwater at this facility have ranged from 29 μg/L or ppb to 7,500 μg/L.

The Proposed Remedial Action Plan and Record of Decision prepared for this facility imposed extensive source removal and the operation of a long-term air sparge and soil vapor extraction system. The air sparge and soil vapor extraction system is currently active at the southern portion of the facility and at locations down-gradient at the northeastern corner of New York Avenue and Old Country Road. This system was designed to address groundwater contamination from the water table to one hundred (100) feet below existing grade (top fifty feet of the aquifer). This system was designed to have a significant radius of influence to capture and treat groundwater contaminants. The operation of this system is requireduntil specific objectives have been met.

### *2.4.3 36 Sylvester Street Site*

All of the information presented in this section was compiled from work performed by LMS under contract with the NYSDEC for the investigation of the NCIA. The work was performed between 1994 and 1997 and included preliminary site assessments and numerous site investigations.

In 1994 a facility inspection (including a historical chemical / waste inventory) was performed with respect to this Site. The Site was vacant at that time, but the previous occupant was identified as National Gear Products. The Site was identified to have been previously used for warehousing. Chemical inventory for the Site included mineral spirits and lubrication oils. A potential ranking of a contamination source was listed as moderate. Additional inspections were documented in 1997 reports. It was reported that documented chemical usage at the Site did not clearly indicate PCE or TCA-related chemical use. An investigation was performed at the Site that identified the presence of a cesspool. The sediment within the cesspool was sampled and analyzed. The results failed to detect any solvent-related contamination above the applicable SCGs. Solvent-related groundwater contamination was detected at the Site and was suspected to have migrated from the adjacent facility, Tishcon Corporation at Brooklyn Avenue site. No direct evidence that the Site was a contributor to the underlying groundwater contamination was ever documented.

## 3. SITE SURVEY PLAN

All of the information presented in this section of the report was presented in the Site Survey Report, dated November 20, 2000.

Site survey activities were conducted from August 14, 2000 to October 19, 2000. The activities conducted for the site survey included exterior and interior inspections, a remote sensing survey and a destructive survey to identify any potential pollution sources. A photographic log was compiled for the survey and can be referenced in Appendix A. The following table provides the dates, project personnel and work tasks performed for the site survey aspect of the FRI.

| Date | Project Personnel | Site Survey Activity |
|---|---|---|
| August 14, 2000 | Jim Allen<br>Kevin Kleaka | Interior/Exterior Inspection |
| August 18, 2000 | Kevin Kleaka<br>Keith Franzen | Interior/Exterior Inspection |
| October 2 & 3, 2000 | Kevin Kleaka<br>Eric Krist | Remote Sensing Survey |
| October 16, 18 & 19, 2000 | Jim Allen<br>Kevin Kleaka | Destructive Survey |

### 3.1 Exterior Inspection

In general, the existing building was found to consist of a one-story, steel framed, masonry block building with a footprint of 12,125 square feet. The surface area of the Site consisted of asphalt parking/walkways (~34%), concrete walkways/pads (~5%), exposed soil (less than 1%) and the existing building (~60%). The main entrance of the building fronts on Sylvester Street (see Photo 1) and the warehouse portion of the building fronts on New York Avenue (see Photo 2). Two alleyways exist on the north and south side of the building (see Photos 3 and 4). A loading dock exists on the northwestern side of the building (see Photo 4). Said loading dock included a concrete ramp and retaining wall. No drainage structures were identified at the base of the loading ramp. A small parking area exists on the southeastern side of the building.

Natural gas service entered the building from the east side along New York Avenue. Electric service was overhead and entered the building from New York Avenue. Water service entered the building from the west side along Sylvester Street. All exterior roof drainage associated with the building appeared to be directed to grade. Two (2) sanitary vents and one (1) sanitary trap exist on the southeastern side of the existing building (see Photo 5). A PVC flex pipe (~1/2-inch diameter) was identified to protrude the southern exterior wall and connect with the sanitary vent (see Photo 6). Said pipe was not presently connected with any plumbing fixtures within the interior of the building.

Three (3) pipes were noted to protrude through the southern exterior wall of the building (see Photo 7). Two (2) of said pipes (~2" PVC and steel construction) were determined by visual observation to function as vents for interior bathrooms. The third pipe (~2" steel with elbow) was determined by visual observation to be associated with the sprinkler system within the building. A pipe of unknown function was identified at grade on the southern side of the building (see Photo 8).

A set of fill and vent pipes were noted to protrude through the southern and northern exterior wall of the building (see Photo 9). These fill and vent pipes were suspected to be associated with the former fuel oil USTs that were removed from the Site. A concrete pad was noted by the southeastern corner of the building. Said pad appeared to formerly facilitate electrical transformers. No chemical staining was noted on the surface of the pad or surrounding surface areas.

The exterior inspection of the Site identified the following features that warranted further investigation using remote sensing and/or destructive survey methods.

| Potential Pollution Source | Site-Specific Location | Photograph Reference |
|---|---|---|
| Sanitary vent pipes | Southeast side of building | Photo 5 |
| Pipe with unknown function at grade surface. | South side of building | Photo 8 |

Exterior Site features readily determined not to function as routes or mechanisms for the release or injection of hazardous substances to the Site included: vent pipes protruding through the southern wall of the building associated with bathroom plumbing, the stand pipe associated with sprinkler system, roof drainage pipes directed to grade and vent and fill pipes associated with abandoned fuel oil USTs.

### 3.2 Interior Inspection

The interior space occupied by Gel-Tec was primarily utilized as a warehouse for raw material storage associated with pharmaceutical manufacturing (see Photo 10). The interior of the building was not utilized for any manufacturing operations. In addition, the interior of the building was partitioned to include three bathrooms, a maintenance room, office space, a laboratory, a utility room and other vacant miscellaneous rooms. The laboratory was utilized for quality assurance purposes with respect to the raw materials stored at the warehouse (see Photo 11). General administrative office space was noted in the western portion of the building.

The floor of the interior of the building was constructed of a poured concrete slab. The concrete floor was inspected to identify any discontinuities that may represent evidence of former plumbing features and/or chemical storage tanks associated with prior interior operations. In addition, exposed plumbing features were also inspected to determine building effluent paths.

The interior inspection of the building identified the following features that warranted further investigation using remote sensing and/or destructive survey methods.

| Potential Pollution Source | Interior Location | Photograph Reference |
|---|---|---|
| Roof drainage pipe with capped port directed below grade | Western portion of building addition (Warehouse) | 12 |
| Concrete patch adjacent to roof drainage pipe | Western portion of building addition (Warehouse) | 12 |
| Floor Drains | Southeastern portion of building addition (Warehouse) | 13 and 14 |
| Concrete patch | Southeast portion of | 15 |

| | | |
|---|---|---|
| | original building (Warehouse) | |
| Roof drainage pipe with open port directed below grade | Southern portion of original building (Warehouse) | 16 |

Interior features and discontinuities determined not to function as routes or mechanisms for the release or injection of hazardous substances included former equipment mounting brackets, electrical conduits and piping associated with a former air conditioning unit.

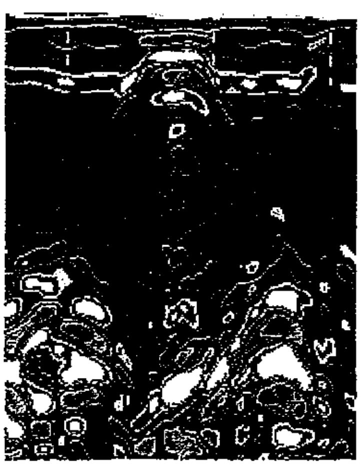
## 3.3 Remote Sensing Survey

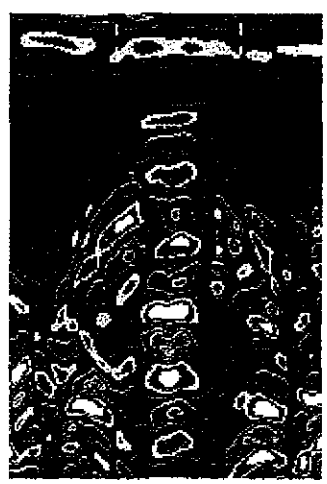
A remote sensing survey was performed over the entire exterior surface of the Site to identify any subsurface structures that may represent point or non-point pollution sources. The survey was performed with a GSSI SIR System-2 ground penetrating radar (GPR) unit. A coordinate system consisting of five-foot intervals (north-south and east-west) was established on the planimetric surface of the Site. One GPR scan per grid transect was acquired for interpretive field analysis. Each GPR scan was designated with a coordinate number corresponding to the scanning location and direction. All GPR scans and coordinate numbers were mapped onto the Site map as presented in Plate 3.

An analysis of the data acquired from the survey detected two significant subsurface dielectric anomalies representative of potential pollution sources. The coordinate reference number, GPR generated imagery and corresponding interpretive analysis obtained from said anomalies are presented as follows.

File 81: 70

The subsurface patterns identified in these GPR images were consistent with the size and shape of a concrete dome associated with an underground injection well. Based on the location of this detected anomaly, it was suspected that this subsurface feature may represent a sanitary cesspool.





File 85: 71

The subsurface patterns identified in these GPR images were consistent with the size and shape of a concrete dome associated with an underground injection well. Based on the location of this detected anomaly, it was suspected that this subsurface feature may represent a sanitary cesspool.

The Site remote sensing survey identified the following subsurface dielectric anomalies that warranted further investigation using destructive survey methods.

| Potential Pollution Source | Exterior Location | GPR Coordinate Reference |
|---|---|---|
| Detected anomaly interpreted as UIW | Southeastern portion of Site | 81: 71 |
| Detected anomalies interpreted as UIW | Southeastern portion of Site | 85 : 71 |

The balance of the GPR scans failed to detect the presence of any additional significant subsurface dielectric anomalies interpreted as potential pollution sources.

### 3.4 Destructive Survey

A destructive survey was performed with regards to specific Site features identified from the Site inspection and remote sensing survey that warranted further investigation. The destructive survey was performed to generate additional information concerning the structure and function of these features to determine migration paths and outfall locations of any potential Site pollution sources. The work tasks associated with the destructive survey utilized equipment and/or techniques that included backhoes, manual excavating tools, masonry saws, jack hammers, dye tracing flow studies, plumbing snakes, electromagnetic finders and subsurface pilot probes to access and/or investigate each of the Site features. The Site features that were subjected to destructive investigation were as follows.

| Potential Pollution Source | Site-Specific Location | Investigative Method | Photo Reference |
|---|---|---|---|
| Detected anomalies interpreted as UIWs (sanitary cesspools) | Southeastern portion of Site | Direct sensing probes/excavation/flow study | Photos 17, 18 and 19 |
| Pipe with unknown function at grade surface. | South side of building | Transmitter snake, electromagnetic finder | Photo 20 |
| Roof drainage pipe with capped port directed below grade | Western portion of building addition (Warehouse) | Excavation/flow study | Photo 12 |
| Concrete patch adjacent to roof drainage pipe | Western portion of building addition (Warehouse) | Excavation/flow study | Photo 12 |
| Floor Drains | Southeastern portion of building addition (Warehouse) | Excavation/flow study | Photo 21, 22 and 23 |
| Concrete patch | Southeast portion of original building (Warehouse) | Excavation | Photo 24 |
| Roof drainage pipe with open port directed below grade | Southern portion of original building (Warehouse) | Flow study | Photo 16 |

With respect to the detected anomalies identified on the southeastern exterior portion of the Site, the installation of several direct sensing probes was conducted to identify the presence of any subsurface structures (i.e. the pre-cast walls and domes). Said probes confirmed the presence of two (2) subsurface structures. Accordingly, excavation activities were conducted to expose the subsurface structures. The excavation revealed the presence of two (2) abandoned underground injection wells (cesspools) associated with the former on-site sanitary disposal system. Said UIWs had not been backfilled. These UIWs were observed during all dye tracing activities referenced below. None of the dye tracing activities detected any evidence that indicated interior plumbing features were actively connected with these UIWs. Furthermore, a septic tank was not suspected as being present based on the close proximity and direction of subsurface piping within the primary UIW in reference to the sanitary trap. Although, the site plans at the time of construction depicted a septic tank and one (1) cesspool, it was expected that the septic tank was never installed and an additional cesspool was utilized in lieu of the septic tank. As such, the UIWs were identified as point-pollution sources.

With respect to the pipe of unknown function at grade on the southern side of the building, a transmitter snake was inserted within the confines of said pipe and traced. The transmitter signal was traced toward the interior of the building with an electomagnetic finder. Based on the detection of the transmitter signal within the building, it was determined that the pipe was associated with a former interior air conditioning unit. No liquid or chemical odor was detected on the snake. As such, this feature was not identified as a pollution source.

With respect to the interior roof drainage pipe with capped ports in the western portion of the warehouse, a dye tracing flow study was conducted to determine the outfall location of said pipe. The results of said flow study determined that the pipe was connected with the exterior trap, which is connected with the municipal sewer system. As such, said drainage pipe and outfall location were not identified as pollution sources. With respect to the concrete patch adjacent to the roof drainage pipe with capped ports in the western portion of the warehouse, excavation activities were conducted to identify any subsurface structures. The excavation of this feature identified a pipe below grade that was capped. This pipe was suspected to be associated with a former slop sink. Further, it was determined that this capped below grade pipe was connected with the adjacent roof drainage pipe below grade. As such, said below grade pipe and outfall location were not identified as pollution sources.

With respect to the floor drains identified in southeastern portion of the warehouse, excavation activities were conducted to expose the associated plumbing beneath the drains (drains were clogged) to facilitate access to piping for a dye tracing flow study. Each drain trap was identified to contain an oily substance similar to that of cutting lubrication oil. The results of said flow study determined that the pipes were connected with the exterior trap, which is connected with the municipal sewer system. As such, said floor drains and outfall locations were not identified as pollution sources.

With respect to the concrete patch identified in southeastern portion of the warehouse, excavation activities were conducted to identify the presence of any subsurface structures. The excavation revealed below grade pipes. Said pipes were exposed to facilitate a dye tracing flow study. The results of said flow study determined that the pipes were connected with the exterior trap, which is connected with the municipal sewer system. As such, said below grade pipes and outfall location were not identified as pollution sources.

With respect to the interior roof drainage pipe with open ports in the southern portion of the warehouse, a dye tracing flow study was conducted to determine the outfall location of said pipe. The results of said flow study determined that the pipe was connected with the exterior trap, which is connected with the municipal sewer system. As such, said drainage pipe and outfall location were not identified as pollution sources.

## 4. SAMPLING AND ANALYSIS PLAN

The performance of the Site survey confirmed the presence of two (2) point pollution sources. These point pollution sources were identified as abandoned UIWs associated with the former on-site sanitary disposal system. FRI activities included the acquisition and analysis of representative soil and groundwater samples from said pollution sources. In addition, a comprehensive groundwater survey was performed to assess regional and site-specific groundwater quality. These activities were conducted from March 28 through July 12, 2001.

All sampling and analysis methodology was performed in accordance with the approved FRI Work Plan. Deviations to the plan are noted as follows: 1) at the request of the NYSDEC, some of the proposed groundwater sampling locations were moved to better assess up-gradient groundwater quality; and 2) groundwater monitoring wells were not installed. All changes were approved by the NYSDEC. All of the tasks were performed in conformance with the Health and Safety Plan approved in the work plan. See Appendix B for a copy of the field notes.

### 4.1 Subsurface Soil Sampling

To evaluate the impact of the point pollution sources on soil quality, two (2) soil-sampling locations, identified as UIW-001 and UIW-002, were sited within the center of the UIWs (cesspools) associated with the former on-site sanitary disposal system. The inverts of UIW-001 and UIW-002 were measured at depths of approximately thirteen (13) feet and eighteen (18) feet below existing grade, respectively. Soil sampling was performed using a Geoprobe hydraulic probing tool. All soil-sampling locations can be referenced with Plate 4.

Subsurface soil samples were secured from the invert of each structure continuously to ten (10) feet below the invert of each structure and at specific depth intervals of thirty (30) to thirty-two (32) and forty-three (43) to forty-five (45) feet below existing grade. Six (6) soil samples were selected for subsequent laboratory analysis from UIW-001 and UIW-002 in accordance with the FRI work plan.

## 4.2 Groundwater Sampling

To evaluate the impact of the point pollution sources and former site activities on groundwater quality, nineteen (19) groundwater-sampling locations were sited on and off-Site in accordance with the FRI work plan. Groundwater sampling was performed using a Geoprobe hydraulic probing tool for the installation of temporary groundwater well points. Three (3) groundwater samples were obtained from each temporary groundwater well point at depth intervals of fifty-six (56) to sixty (60), sixty-six (66) to seventy (70) and seventy-six (76) to eighty (80) below existing grade in accordance with the FRI work plan. All groundwater- sampling locations can be referenced with Plate 4.

Two (2) groundwater-sampling locations, identified as UIW-001 and UIW-002, were sited within the center of the UIWs (cesspools) associated with the former on-site sanitary disposal system.

Fifteen (15) additional groundwater sampling-locations were sited to represent groundwater quality hydraulically up-gradient and down-gradient of the Site. The hydraulically up-gradient groundwater sampling locations that were intended to intercept any groundwater contaminants entering the Site were identified as GP-003, GP-004, GP-005, GP-006 and GP-007. These sampling points were sited on the eastern border of the Site. In addition, five (5) groundwater-sampling locations were sited on the eastern side of New York Avenue (to the east of the Site) off-Site to represent groundwater hydraulically up-gradient of the Site. The hydraulically down-gradient sampling locations (relative to the Site pollution source) were identified as GP-008, GP-009 and GP-010. These sampling points were sited to the southwest of the point pollution source.

## 5. RESULTS OF INVESTIGATION

### 5.1 Soil Quality Results

The laboratory analysis of the soil samples secured from within the UIWs, identified as UIW-001 and UIW-002, detected concentrations of target volatile, semi-volatile organic and inorganic (heavy metal) analytes (see Table 1). A comparison of the detected analytes with the applicable New York State Standards, Criteria and Guidelines (SCGs) is provided in Table 2. The original laboratory analysis report (data package for results summary) as prepared by Chemtech is presented in Appendix C of this document.

#### *5.1.1 Analytical Results for UIW-001*

Five (5) target volatile organic analytes were detected above minimum detection limits from the analysis of UIW-001-SSC18 (invert sample), which included acetone, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 1,4-dichlorobenzene and tetrachloroethene. The concentrations of these detected analytes were all below the applicable SCGs. One (1) target volatile organic analyte was detected above minimum detection limits from the analysis of UIW-001-SS20 (20'-22'), which included acetone. The concentration of this detected analytes was below the applicable SCGs. No target volatile organic analytes were detected above minimum detection limits from the analyses of UIW-001-SS22, UIW-001-SS24, UIW-001-SS32 or UIW-001-SS45.

No target semi-volatile organic analytes were detected above minimum detection limits from the analysis of UIW-001-SSC18.

Twenty-two (22) target inorganic analytes were detected above minimum detection limits from the analysis of UIW-001-SSC18, which included aluminum, antimony, arsenic, berium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, vanadium and zinc. Several of these analytes were reported to have been detected in a sample blank and the actual sample. The detected concentrations of chromium, copper, mercury and zinc were above the applicable SCGs.

### *5.1.2 Analytical Results for UIW-002*

No target volatile organic analytes were detected above minimum detection limits from the analyses of UIW-002-SSC22, UIW-002-SS24, UIW-002-SS26, UIW-002-SS28, UIW-002-SS32 or UIW-002-SS45.

One (1) target semi-volatile organic analyte (bis [2-ethylhexyl] phthalate) was detected above minimum detection limits from the analysis of UIW-002-SSC22. The concentration of the detected analyte was below the applicable SCGs.

Twenty-two target inorganic analytes were detected above minimum detection limits from the analysis of UIW-002-SSC22, which included aluminum, antimony, arsenic, berium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, vanadium and zinc. Several of these analytes were reported to have been detected in a sample blank and the actual sample. The concentrations of the detected analytes were all below the applicable SCGs.

## 5.2 Groundwater Quality Results

The laboratory analysis of the multi-depth groundwater samples secured from the point pollution source, (UIW-001 and UIW-002), hydraulically up-gradient (GP-3, GP-4, GP-5, GP-6, GP-7, GP-11, GP-12, GP-13, GP-14, GP-15, GP-16 and GP-17) and hydraulically down-gradient (GP-8, GP-9 and GP-10) locations detected concentrations of target volatile analytes (see Table 3). The most prevalent contaminants detected in on-Site and off-Site groundwater samples consisted of halogenated aliphatics, which are commonly referred to as chlorinated solvents. The chlorinated solvent-related groundwater contamination detected from on-Site and off-Site groundwater samples included target analytes such as tetrachloroethene (PCE), trichloroethene (TCE), 1,1,1-trichloroethane (111 TCA), 1,1,2-trichloroethane (112 TCA), 1,1-dichloroethane

(11 DCA) and 1,1-dichloroethene (11 DCE). In general, the majority of the detected concentrations of these target analytes were above the applicable SCGs. A comparison of the detected analytes with the applicable SCGs is provided in Table 3. The concentrations of total volatile organic analytes from the analysis of all the groundwater samples ranged from approximately twenty-five (25) micrograms per liter (µg/L) or parts per billion to four thousand (4,000) µg/L. The groundwater samples that exhibited the most elevated concentrations of target analytes were generally located toward the southeastern corner of the Site and immediately west of New York Avenue. The original laboratory analysis report (data package for results summary) as prepared by Chemtech is presented in Appendix C.

The individual analytes detected in the groundwater samples that were the most prevalent (spatially and concentration) consisted of TCE, 1,1,1-TCA, 1,1-DCA and 1,1-DCE. The concentrations of these individual analytes ranged from non-detect (U) to twenty-five hundred (2,500) µg/L. Within this range, 1,1,1-TCA was detected at the most elevated concentrations. Of all the groundwater sampling locations sited for this investigation, the groundwater samples secured from GP-7 have exhibited the greatest concentrations of PCE, TCE and 1,1,1-TCA.

## 5.3 Evaluation of Groundwater Data

The purpose of this section is to provide an interpretation of the concentrations and distribution of individual chlorinated solvent-related analytes that were predominately detected in the groundwater at the site and off-site (see Plates 5-7).

### *5.3.1 Tetrachloroethene (PCE)*

PCE was detected in the multi-depth groundwater samples secured from this investigation at concentrations ranging from non-detect to seventy-two (72) µg/L. The applicable SCG for this analyte is five (5) µg/L. The concentrations of PCE detected in up-gradient groundwater samples were within the same order of magnitude as compared with the point pollution source and down-gradient locations relative to sample depth within the groundwater.

### *5.3.2 Trichloroethene (TCE)*

TCE was detected in the multi-depth groundwater samples secured from this investigation at concentrations ranging from non-detect to thirteen hundred (1,300) μg/L. The applicable SCG for this analyte is five (5) μg/L. The concentrations of TCE detected in up-gradient groundwater samples were either higher or within the same order of magnitude as compared with the point pollution source and down-gradient locations relative to sample depth within the groundwater.

### *5.3.3 1,1,1-Trichloroethane (1,1,1-TCA)*

1,1,1-TCA was detected in the multi-depth groundwater samples secured from this investigation at concentrations ranging from four (4) to twenty-five hundred (2,500) μg/L. The applicable SCG for this analyte is five (5) μg/L. The groundwater samples secured off-site (east side of New York Avenue) from GP-13, GP-14, GP-15, GP-16 and GP-17 all detected the presence of 1,1,1-TCA. The concentrations of 1,1,1-TCA detected in up-gradient groundwater samples secured from GP-4, GP-5, GP-6 and GP-7 were within the same order of magnitude as compared with the point pollution source and down-gradient locations relative to sample depths at sixty (60) and eighty (80) feet below existing grade. The concentrations of 1,1,1-TCA detected in up-gradient groundwater samples secured from GP-4, GP-5, GP-6 and GP-7 were either marginally less than or within one order of magnitude as compared with the point pollution source and down-gradient locations relative to sample depths at seventy (70) feet below existing grade.

### *5.3.4 1,1-Dichloroethane (1,1-DCA)*

1,1-DCA was detected in the multi-depth groundwater samples secured from this investigation at concentrations ranging from non-detect to one thousand (1,000) μg/L. The applicable SCG for this analyte is five (5) μg/L. The groundwater samples secured off-Site (east side of New York Avenue) from GP-13, GP-14, GP-15, GP-16 and GP-17 all detected the presence of 1,1-DCA.

The concentrations of 1,1-DCA detected in up-gradient groundwater samples secured from GP-4, GP-5, GP-6 and GP-7 were within the same order of magnitude as compared with the point pollution source and down-gradient locations relative to sample depths at sixty (60) feet below existing grade. The concentrations of 1,1-DCA detected in up-gradient groundwater samples secured from GP-4, GP-5, GP-6 and GP-7 were either marginally less than or within one order of magnitude as compared with the point pollution source and down-gradient locations relative to sample depths at seventy (70) and eighty (80) feet below existing grade.

### *5.3.5 1,1-Dichloroethene (1,1-DCE)*

1,1-DCE was detected in the multi-depth groundwater samples secured from this investigation at concentrations ranging from non-detect to seven hundred twenty (720) µg/L. The applicable SCG for this analyte is five (5) µg/L. The groundwater samples secured off-site (east side of New York Avenue) from GP-13, GP-14, GP-15, GP-16 and GP-17 all detected the presence of 1,1-DCE.

The concentrations of 1,1-DCE detected in up-gradient groundwater samples secured from GP-4, GP-5, GP-6 and GP-7 were within the same order of magnitude as compared with the point pollution source and down-gradient locations relative to sample depths at sixty (60) feet below existing grade. The concentrations of 1,1-DCE detected in up-gradient groundwater samples secured from GP-4, GP-5, GP-6 and GP-7 were either higher or within the same order of magnitude as compared with the point pollution source and down-gradient locations relative to sample depths at sixty (60) feet below existing grade.

The concentrations of 1,1-DCE detected in up-gradient groundwater samples secured from GP-4, GP-5, GP-6 and GP-7 were either marginally less than or within one order of magnitude as compared with the point pollution source and down-gradient locations relative to sample depths at seventy (70) feet below existing grade.

The concentrations of 1,1-DCE detected in up-gradient groundwater samples secured from GP-4, GP-5, GP-6 and GP-7 were within one order of magnitude as compared with the point pollution source and down-gradient locations relative to sample depths at eighty (80) feet below existing grade.

## 6. INTERIM REMEDIAL MEASURES

Based on the data obtained from the FRI, IRM were performed at the Site to mitigate the contaminants detected in the former on-site sanitary system. The nature and extent of the contamination was limited to heavy metals in the unsaturated soil within one former primary cesspool (UIW-001). The results of the FRI failed to indicate any impact to groundwater quality from this point pollution source. Accordingly, the treatment technologies developed for the pollution source at the Site were designed to permanently remove the toxicity, mobility and volume of contaminants to the maximum extent practicable. An evaluation of the effectiveness of the IRM activities was implemented through the performance of additional sampling and analysis (end-point sampling) to assure compliance with applicable New York State SCGs.

### 6.1 Selection and Implementation of Remedial Measures

#### *6.1.1 Remedial Action Objectives*

The remedial action objectives for the IRM activities implemented for the pollution source at the Site was to permanently remove the toxicity, mobility and volume of contaminants in accordance with the applicable New York State SCGs. The purpose of meeting these objectives was for the overall protection of human health and the environment. The applicable SCGs for Site soil quality is defined under the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046, Determination of Soil Cleanup Objectives.

#### *6.1.2 Selection of Remedial Alternatives*

The extent of the pollution source was determined to be isolated to Site soil. The nature of the pollution source consisted of industrial heavy metal related contaminated soil. Based on these findings, the remedial alternative selected for the pollution source consisted of removal and off-Site disposal. This remedial alternative was anticipated to be effective for full recovery of the impacted media.

*6.1.3 Removal and Off-Site Disposal*

The UIW, identified as UIW-001, was uncovered and accessed utilizing a backhoe. The contaminated media was previously classified (waste classification analysis) pursuant to Title 6 NYCRR Part 371 and determined to have a non-hazardous waste stream (see Appendix D). These activities were conducted on May 10, 2002.

The contaminated sediment contained within the underground injection well, UIW-001, was excavated utilizing an excavator (backhoe) to a depth of approximately twenty (20) feet below existing grade. The integrity of the underground injection well structure was unaffected from the excavation activities and was left in-place. Approximately fifteen (15) cubic yards of impacted sediment was removed from the underground injection well and transferred into a proper waste container for subsequent off-site disposal. The contaminated media was handled, transported with waste charters and disposed in accordance with Title 6 NYCRR Part 371 and EPA 40 CFR 261 Criteria to RGM, Inc. of Deer Park, New York. (see Appendix D to review the waste manifests) The excavation was backfilled with clean soil to grade.

The UIW, identified as UIW-002, was uncovered and accessed utilizing a backhoe. No remedial activities were required with respect to this structure. The structure was accessed for proper abandonment procedures. This included the backfilling of the UIW with clean soil to grade.

## 6.2 End-Point Sampling and Analysis Results

One endpoint sample was secured from the excavated invert of the UIW, UIW-001. The laboratory analysis of the soil sample secured from within the UIW, UIW-001, failed to detect any concentrations of target volatile or semi-volatile organic analytes above minimum detection limits (see Table 4). The laboratory analysis detected target inorganic (heavy metal) analytes. The detected concentrations were below the applicable SCGs (see Table 5). The original laboratory analysis report (data package for results summary) as prepared by Chemtech foe these results is presented in Appendix D.

## 7. DATA USABILITY SUMMARY REPORT

This Data Usability Summary Report (DUSR) was prepared to provide an evaluation of analytical data obtained from the collection of subsurface soil and groundwater samples from the Site. The primary objective of this DUSR was to determine if the data obtained met the applicable criteria for data quality assurance. The DUSR was developed by reviewing each of the NYSDEC ASP B deliverables provided by the selected laboratory (Chemtech, New Jersey). To determine the validity and usability of the data obtained from the Site, a series of technical questions were raised pertaining to specific quality assurance and control (QA/QC) requirements defined under the specified test methods.

The questions were as follows.

| (~ Not Applicable) | Deliverable Lab Code: L3772 | N5202 | N5206 | P2591 |
|---|---|---|---|---|
| • Were all chain of custody records present and completed? | Y | Y | Y | Y |
| • Were the analyses performed as per methods requested? | Y | Y | Y | Y |
| • Was the data package complete as defined under requirements for NYSDEC ASP B deliverables? | Y | Y | Y | Y |
| • Were the required holding times met for all matrices and analytical parameters? | Y | Y | Y | Y |
| • Were samples correctly preserved? | Y | Y | Y | Y |
| • Was sample preparation correctly documented? | Y | Y | Y | Y |
| • Was % moisture less than 50% for all soil samples? | Y | Y | Y | Y |
| • Were the calibrations performed at the required frequency? | Y | Y | Y | Y |
| • Were the initial calibration within the acceptable criteria? | Y | Y | Y | Y |
| • Were the method blanks free of contamination? | N | Y | N | Y |
| • Were system monitoring compounds within acceptable limits? | Y | Y | Y | N |
| • Did internal standards meet acceptable criteria? | N | Y | Y | N |
| • Were matrix spike/matrix spike duplicate (MS/MSD) analyzed at the correct frequency? | Y | Y | Y | Y |
| • Did the MS/MSD meet the percent recovery (%R) and relative percent difference (RPD) acceptable criteria? | N | N | N | Y |
| • Was the matrix spike blank sample (MSB) analysis performed at the correct frequency? | Y | Y | Y | Y |
| • Did the MSB meet the percent recovery (%R) criteria? | Y | Y | Y | Y |
| • Did the result for any field duplicate samples meet expected precision requirements? | Y | Y | Y | Y |
| • Were any discrepancies noted when review of raw data (chromatograms) was performed? | N | N | N | N |
| • Were results reported in correct units and soil samples corrected for % moisture? | Y | ~ | ~ | Y |

Deviations that did not meet requirements are described as follows.

Deliverables package code #L3772ASP

The method blank samples from VBLKS01 and VBLKS02 detected the presence of acetone contamination. MS/MSD recovery of 2-Chloro-Vinyl-Ether did not meet requirements. RPD recovery for Benzene did not meet requirements. The recoveries have been properly flagged. Internal Standard Areas met requirements except for 096-UIW-002-SSC18, L3865-02MS and L3865-02MSD. These samples were rerun for confirmation. It is not anticipated that these factors have significantly affected the quality of the data results, and no further action is recommended.

Deliverables package code #N5202ASP

MS/MSD recovery of 1,1,1-Trichloroethane, 2-Chloro-Vinyl-Ether and Trichloroethene did not meet requirements. RPD recovery for Benzene did not meet requirements. The recoveries have been properly flagged. It is not anticipated that these factors have significantly affected the quality of the data results, and no further action is recommended.

Deliverables package code #N5206ASP

MS/MSD recovery of 2-Chloro-Vinyl-Ether did not meet requirements. Internal areas met requirements except for Drywell and WCAI. These samples were rerun for confirmation. The method blank samples from VBLKS01, VBLKS02 and VBLKS03 detected nominal concentrations of methylene chloride and 1,1,1-Trichloroethane contamination. The recoveries have been properly flagged and these matters were taken into consideration for overall key FRI goals. It is not anticipated that these factors have significantly affected the quality of the data results, and no further action is recommended.

Deliverables package code #P2591ASP

Surrogate recoveries did not meet requirement limits (for semi-volatile fraction only) except for Blank and BS. MS recoveries met requirements except for 4-Chloroaniline and Acenaphthene. Internal standard areas met requirements except for 096-UIW-001-EP-20'. The recoveries have been properly flagged and these matters were taken into consideration for overall key FRI goals. It is not anticipated that these factors have significantly affected the quality of the data results, and no further action is recommended.

## 8. CONCLUSIONS

The former on-site sanitary system was the only point pollution source identified at the Site. No other confirmed pollution sources were identified under the scope of this focused remedial investigation or any historic investigations conducted by the New York State Department of Environmental Conservation at the Site. The point pollution source identified on the Site was subjected to interim remedial measures and has been permanently removed. The remedial objectives for protecting human health and the environment have been sufficiently met for the point pollution source in accordance with the applicable New York State Standards, Criteria and Guidelines. This is demonstrated by the following facts.

- The only soil contamination ever detected from the point pollution source above the applicable SCGs was heavy metal-related contamination.

- The extent of heavy metal-related soil contamination detected in the point pollution source (UIW-001) was limited to within four feet from the invert of the structure.

- The analytical end-point data obtained subsequent to the removal of the point pollution source failed to detect any remaining soil contamination above the applicable SCGs.

Neither the point pollution source or former site activities have impacted the groundwater quality of the Site or hydraulically down-gradient properties. This is demonstrated by the following facts.

- Historical and present chemical usage at the Site failed to reveal the storage or handling of any chlorinated solvent related products.

- No volatile organic analytes were detected within any of the soil samples secured from this investigation or any historic investigations within or beneath the point pollution source above the applicable SCGs.

- The target analytes detected above the applicable SCGs from the point pollution source were inconsistent with the target analytes present in the underlying regional groundwater contaminant plume.

- The majority of target analytes detected in the solvent-related groundwater contaminant plume were present in up-gradient groundwater samples within the same order of magnitude as compared with the point pollution source and down-gradient locations relative to sample depth within the groundwater.

- The listed Class 2 Inactive Hazardous Waste Disposal Site (Tishcon Corporation at Brooklyn Avenue site) located immediately adjacent to the east of the Site has historically used large volumes of chlorinated solvent-related products such as 1,1,1-TCA. The Tishcon Corporation at Brooklyn Avenue site has been clearly documented as a primary contributor of chlorinated solvent-related groundwater contamination including 1,1,1-TCA, 1,1-DCA and 1,1-DCE.

- The concentrations of 1,1,1-TCA detected in groundwater at the Tishcon Corporation at Brooklyn Avenue site have ranged from 500 ppb to 74,000 ppb. The concentrations of 1,1,-DCE detected in groundwater at this site have ranged from 58 ppb to 1,500 ppb. The concentrations of 1,1,-DCA detected in groundwater at this site have ranged from 29 ppb or to 7,500 ppb. These target analytes were detected most predominately on the 36 Sylvester Street Site.

- The Tishcon Corporation at Brooklyn Avenue site is currently operating an air sparging and soil vapor extraction system approximately one hundred and twenty feet away from the Site. The design of this system was intended to create a wide radius of influence. This sparge system is creating a localized mounding affect on the water table and is likely altering groundwater flow direction and contaminant migration paths toward the Site. This is evident based on the results of the analysis of the groundwater sample (GP-7) secured within the closest proximity to the remedial system. The results from this groundwater sample exhibited the greatest concentrations of any individual and total concentrations of target solvent-related groundwater contaminants.

- Hydrogeologic studies have revealed that a localized groundwater mound was present in the immediate vicinity of the Site. This local mounding was reported to alter the groundwater flow direction in this area. The groundwater gradient contours indicated that groundwater flow direction would be toward the west. This data further supports the likelihood of contaminant migration (historically and presently) in the groundwater emanating from the Tishcon Corporation at Brooklyn Avenue site.

## 9. RECOMMENDATIONS

Based on the results of this Focused Remedial Investigation and a comprehensive analysis of historical data, no further action is recommended for the Site. The 36 Sylvester Street Site (Site Code #1-30-043U) should be de-listed from the New York State Department of Environmental Conservation registry of Inactive Hazardous Waste Disposal Sites.

## 10. REFERENCES CITED


Franke, O.L., and Cohen, Philip, 1972, Regional rates of groundwater movement on Long Island, New York: U.S. Geological Survey Professional Paper 900-c, pp. c271-277.

Lawler, Matusky & Skelly Engineers, March 1997, Multisite PSA Task 4 Report.

Lawler, Matusky & Skelly Engineers, October 1994, Preliminary Site Assessment Report, Volume I.

Lawler, Matusky & Skelly Engineers, February 1995, Site Investigation Report.

Leamond, C.E., Haefner, R.J., Cauller, S.J., and Stackelberg, P.E., 1991, Ground-water quality in five areas of differing land use in Nassau and Suffolk Counties, Long Island, New York, U.S. Geological Survey Professional Paper 91-180, pp. 2 –7.

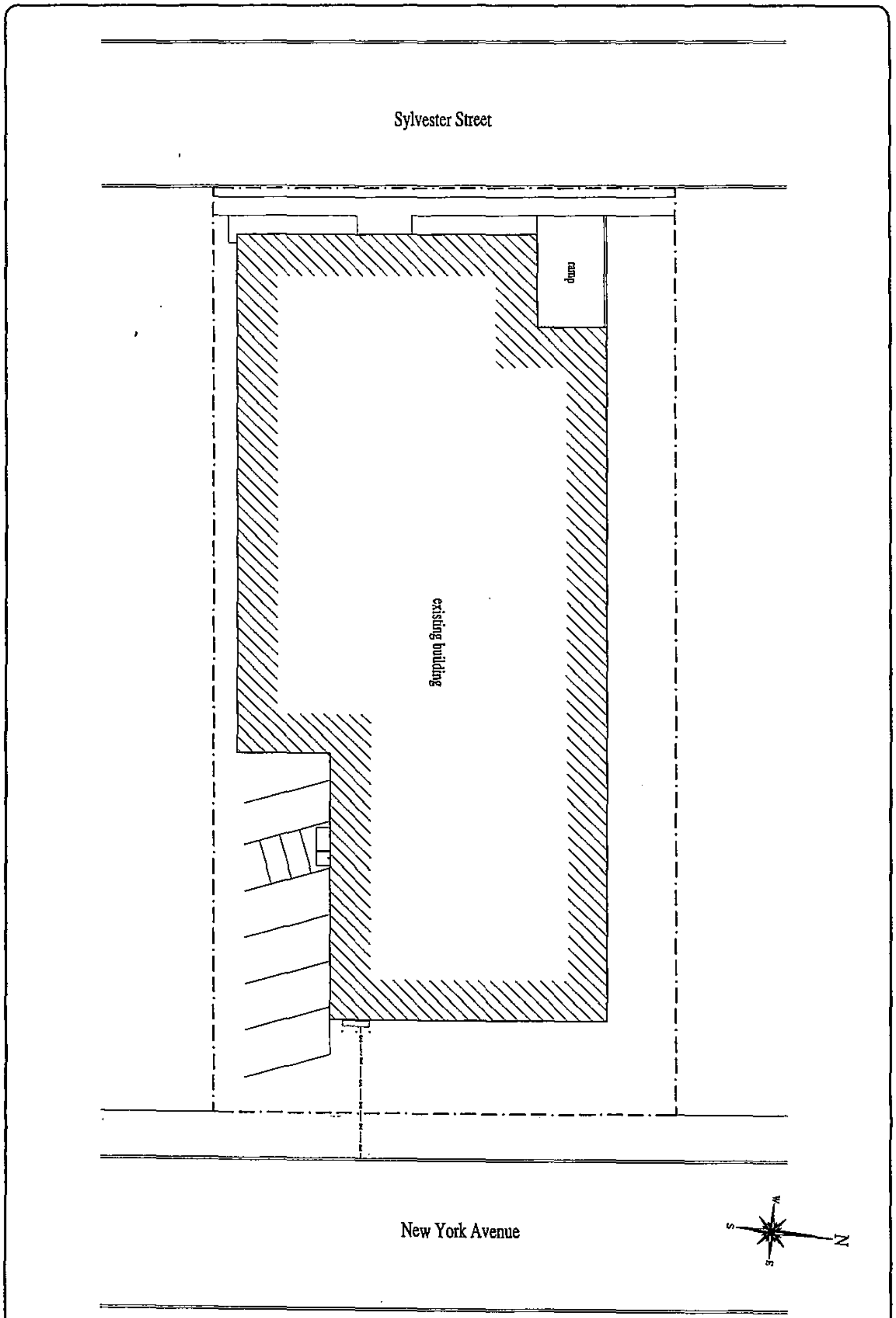
Nassau County Department of Health, June 1986, Investigation of Contaminated Aquifer Segments, Nassau County, New York.

# PLATES

36 Sylvester Street Site
Site Code 1-30-043U
Westbury, New York

**PLATE 1: SITE LOCATION MAP**


Scale 1:24000
CONTOUR INTERVAL 10 FEET
DASHED LINES REPRESENT 5 – FOOT CONTOURS
DATUM IS MEAN SEA LEVEL
DEPTH CURVES AND SOUNDINGS IN FEET – DATUM IS MEAN LOW WATER





IMPACT ENVIRONMENTAL
a division of Impact Environmental Consulting Inc.
1 Village Plaza
Kings Park, New York 11754

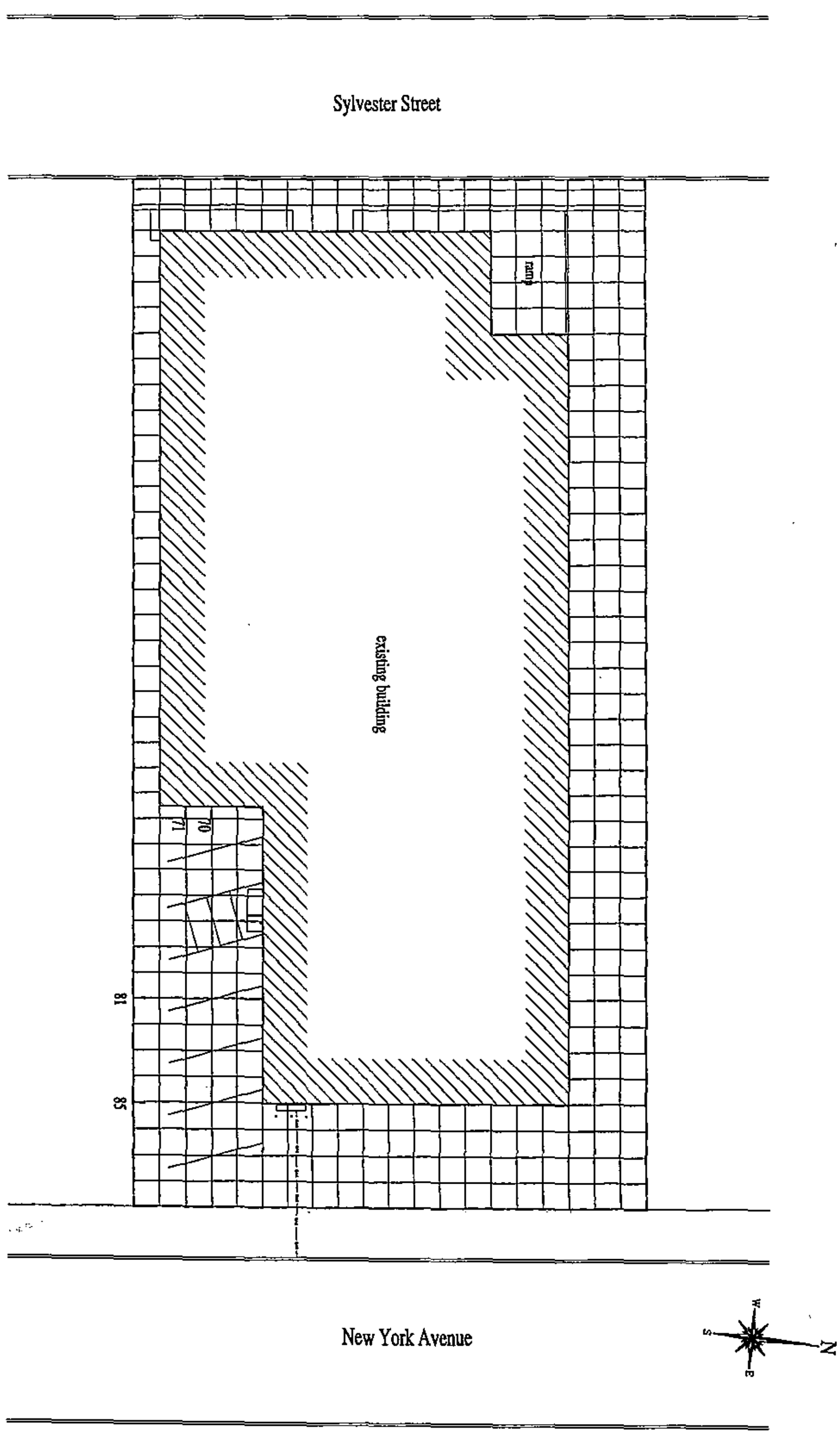

36 Sylvester Street Site 01-30-043U

Plate 2: Site Map

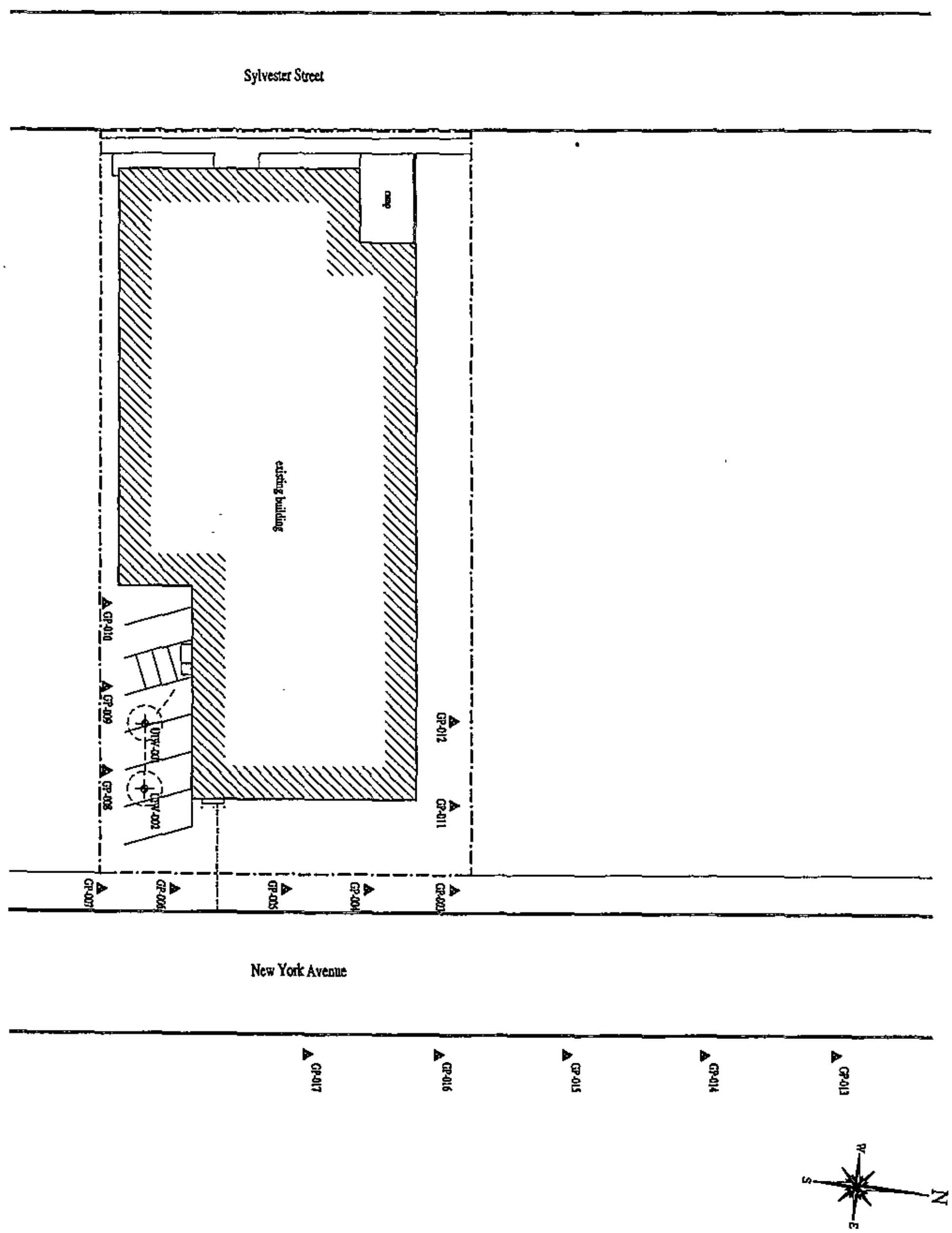
*Westbury, New York*

Legend

scale: 1" = 20'




| | | |
|---|---|---|
| IMPACT ENVIRONMENTAL<br>a division of Impact Environmental Consulting Inc.<br>1 Village Plaza<br>Kings Park, New York 11754 | 36 Sylvester Street Site 01-30-043U<br>Plate 3: GPR Survey Map<br>*Westbury, New York* | Legend<br><br>scale: 1" = 20' |




IMPACT ENVIRONMENTAL

*a division of Impact Environmental Consulting Inc.*

1 Village Plaza
Kings Park, New York 11754

36 Sylvester Street Site 01-30-043U

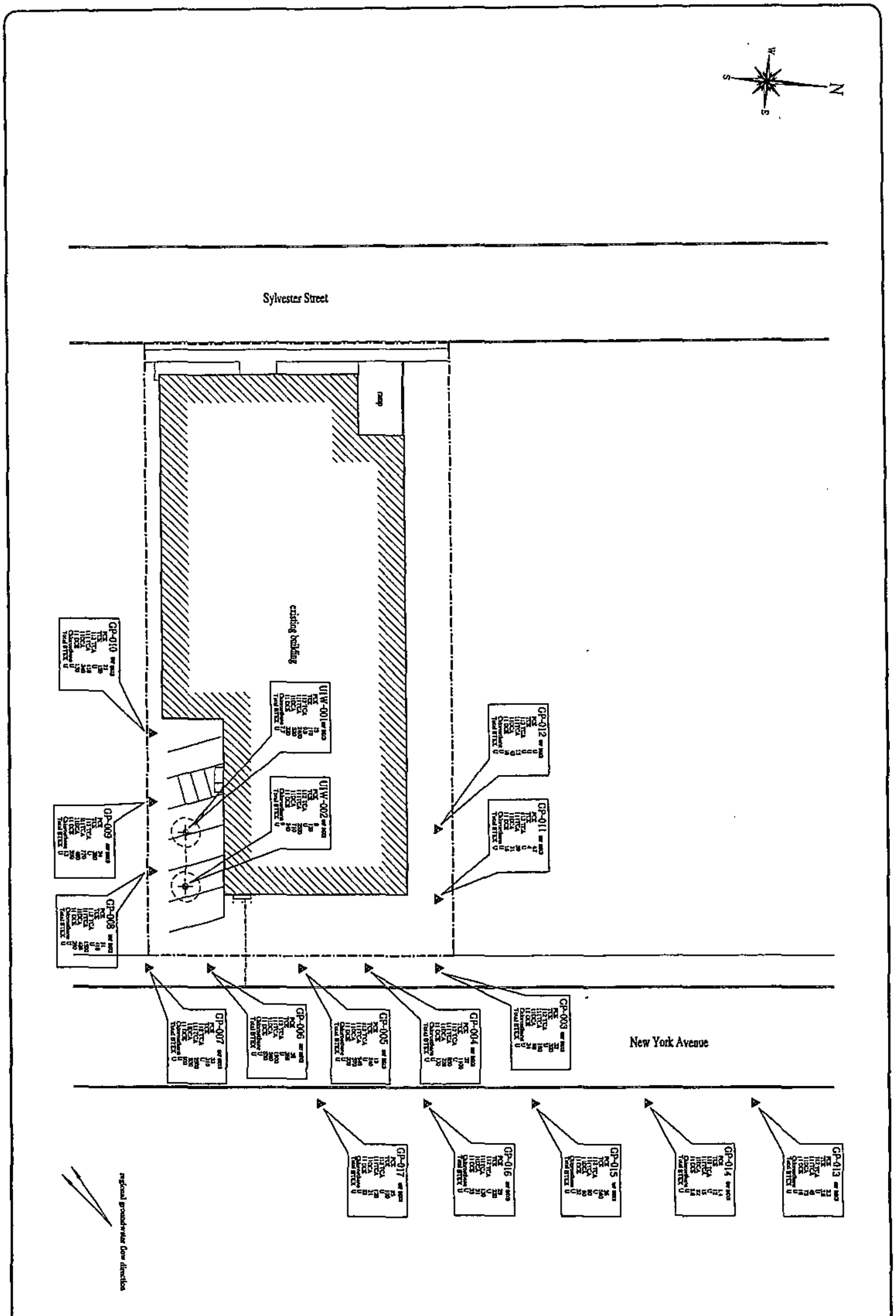
Plate 4: Sample Acquisition Plan

*Westbury, New York*

Legend

- soil and groundwater probe node
- ▲ groundwater probe node

scale: 1" = 30'




IMPACT ENVIRONMENTAL

a division of Impact Environmental Consulting Inc.

1 Village Plaza
Kings Park, New York 11754
631.269.8800 TELEPHONE
631.269.1599 FACSIMILE

36 Sylvester Street Site 01-30-043U

Plate 5: Analyte Concentration Map -60'

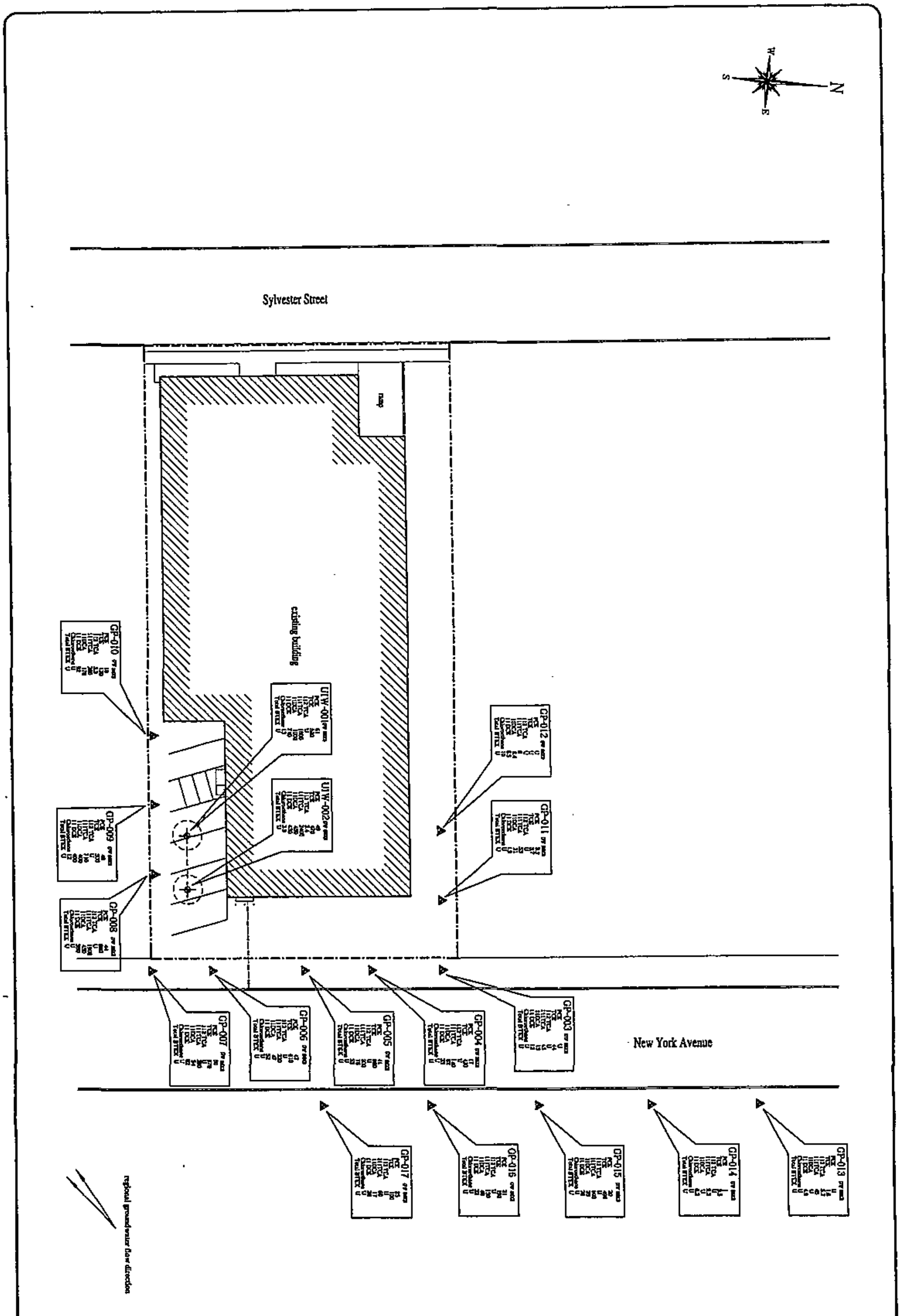
*Westbury, New York*

Legend

- soil and groundwater probe node
- ▲ groundwater probe node

scale: 1" = 30'

GMEI-00450





IMPACT ENVIRONMENTAL

a division of Impact Environmental Consulting Inc.

1 Village Plaza
Kings Park, New York 11754
631.269.8800 TELEPHONE
631.269.1599 FACSIMILE


**36 Sylvester Street Site 01-30-043U**

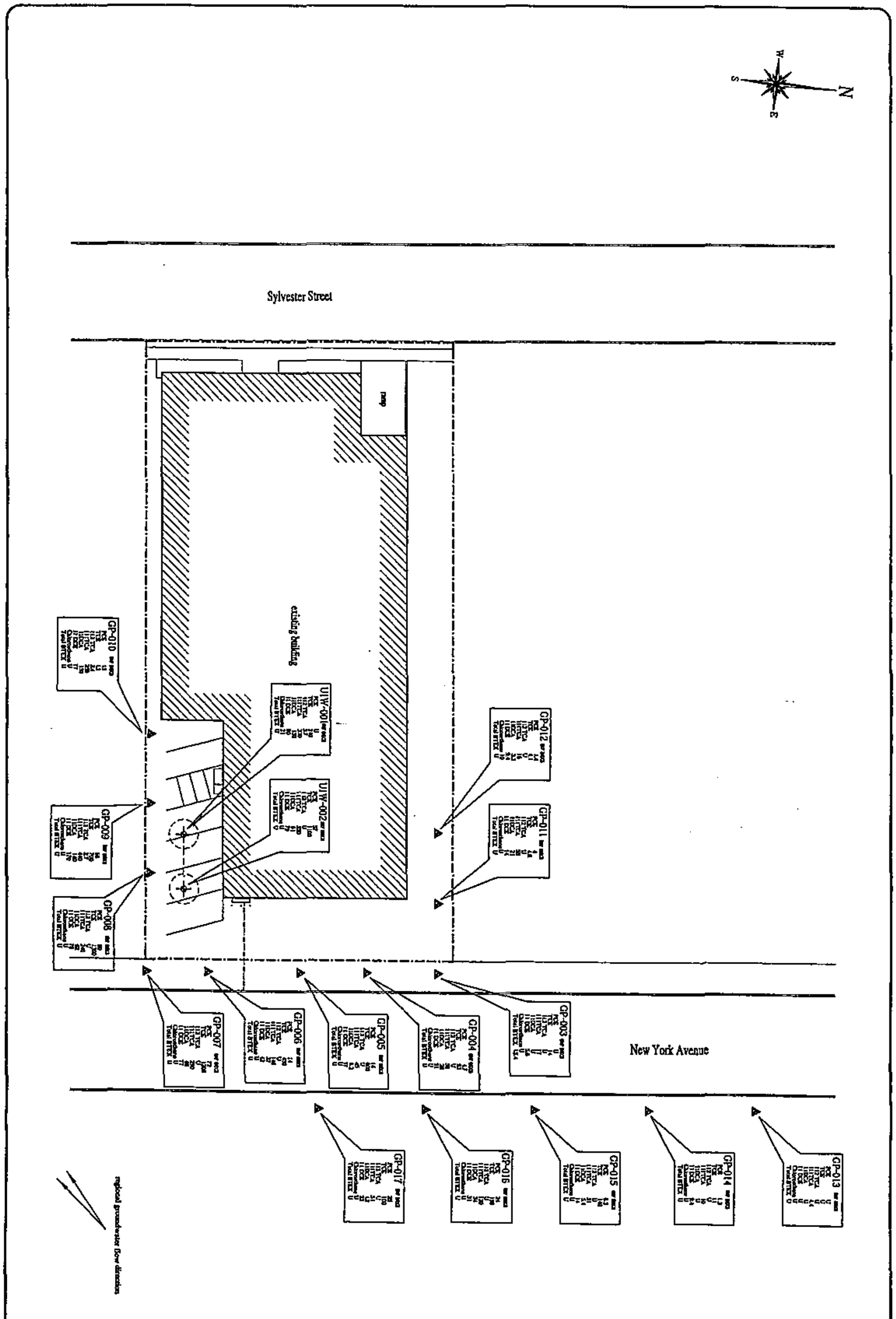
**Plate 6: Analyte Concentration Map-70'**

*Westbury, New York*

**Legend**

- soil and groundwater probe node
- ▲ groundwater probe node

scale: 1" = 30'




IMPACT ENVIRONMENTAL
a division of Impact Environmental Consulting Inc.
1 Village Plaza
Kings Park, New York 11754

36 Sylvester Street Site 01-30-043U

Plate 7: Analyte Concentration Map-80'

*Westbury, New York*

Legend
soil and groundwater probe node
groundwater probe node

scale: 1" = 30'

# TABLES

36 Sylvester Street Site
Site Code 1-30-043U
Westbury, New York

**Table 1:** Volatile Organic Analysis Results-Soil (Page 1 of 4)
36 Sylvester Street Site 01-30-043U

| **Sample ID** | UIW-001-SSC18 | UIW-001-SS20 | UIW-001-SS22 | UIW-001-SS24 | UIW-001-SS32 | UIW-001-SS45 | UIW-002-SSC22 | UIW-002-SS24 | UIW-002-SS26 | UIW-002-SS28 | UIW-002-SS32 | UIW-002-SS45 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Unit* | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg |
| **Volatile Organic Analytes:** | | | | | | | | | | | | |
| Dichlorodifluromethane | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,1-Trichloroethane | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,2-Trichloroethane | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1-Dichloroethane | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1-Dichloroethene | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1-Dichloropropene | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichloroethane | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichloropropane | U | U | U | U | U | U | U | U | U | U | U | U |
| 2,2-Dichloropropane | U | U | U | U | U | U | U | U | U | U | U | U |
| 2-Butanone | U | U | U | U | U | U | U | U | U | U | U | U |
| 2-Chloroethyl Vinyl Ether | U | U | U | U | U | U | U | U | U | U | U | U |
| 4-Methyl-2-Pentanone | U | U | U | U | U | U | U | U | U | U | U | U |
| Acetone | U | 8.5B | 6.1U | 4.3JB | U | U | 16JB | U | U | U | 6B | 7.7B |
| Benzene | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromochloromethane | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromodichloromethane | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromomethane | U | U | U | U | U | U | U | U | U | U | U | U |
| Carbon Disulfide | U | U | U | U | U | U | U | U | U | U | U | U |
| Carbon Tetrachloride | U | U | U | U | U | U | U | U | U | U | U | U |
| Chloroethane | U | U | U | U | U | U | U | U | U | U | U | U |
| Chloroform | U | U | U | U | U | U | U | U | U | U | U | U |
| Chloromethane | U | U | U | U | U | U | U | U | U | U | U | U |
| cis-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | U | U | U |
| cis-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | U | U | U |
| Dibromoethane | U | U | U | U | U | U | U | U | U | U | U | U |
| Methylene Chloride | 3.9J | U | U | 3J | 1.2J | 1.3J | 12J | 2.5J | 2.5J | 2.8J | U | 3J |
| Toluene | U | U | U | U | U | U | U | U | U | U | U | U |
| Trans-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | U | U | U |
| trans-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | U | U | U |
| Trichloroethene | U | U | U | U | U | U | U | U | U | U | U | U |
| Trichlorofluoromethane | U | U | U | U | U | U | U | U | U | U | U | U |
| Vinyl Acetate | U | U | U | U | U | U | U | U | U | U | U | U |
| Vinyl Chloride | U | U | U | U | U | U | U | U | U | U | U | U |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.

GMEI-00454

**Table 1:** Volatile Organic Analysis Results-Soil (Page 2 of 4)
36 Sylvester Street Site 01-30-043U

| **Sample ID** | UIW-001-SSC18 | UIW-001-SS20 | UIW-001-SS22 | UIW-001-SS24 | UIW-001-SS32 | UIW-001-SS45 | UIW-002-SSC22 | UIW-002-SS24 | UIW-002-SS26 | UIW-002-SS28 | UIW-002-SS32 | UIW-002-SS45 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Unit* | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg |
| **Volatile Organic Analytes:** | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,2,2-Tetrachloroethane | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2,3-Trichlorobenzene | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2,3-Trichloropropane | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2,4-Trichlorobenzene | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2,4-Trimethylbenzene | 140 | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dibromo-3-chloropropane | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dibromoethane | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,3,5-Trimethylbenzene | 93 | U | U | U | U | U | U | U | U | U | U | U |
| 1,3-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,3-Dichloropropane | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,4-Dichlorobenzene | 900 | U | U | U | U | U | U | U | U | U | U | U |
| 2-Chlorotoluene | U | U | U | U | U | U | U | U | U | U | U | U |
| 2-Hexanone | U | U | U | U | U | U | U | U | U | U | U | U |
| 4-Chlorotoluene | U | U | U | U | U | U | U | U | U | U | U | U |
| p-Isopropyltoluene | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromobenzene | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromoform | U | U | U | U | U | U | U | U | U | U | U | U |
| Chlorobenzene | U | U | U | U | U | U | U | U | U | U | U | U |
| Dibromochloromethane | U | U | U | U | U | U | U | U | U | U | U | U |
| Ethylbenzene | U | U | U | U | U | U | U | U | U | U | U | U |
| Hexachlorobutadiene | U | U | U | U | U | U | U | U | U | U | U | U |
| Isopropylbenzene | U | U | U | U | U | U | U | U | U | U | U | U |
| m+p-Xylenes | U | U | U | U | U | U | U | U | U | U | U | U |
| Methyl-tert-butyl Ether | U | U | U | U | U | U | U | U | U | U | U | U |
| Napthanlene | U | U | U | U | U | U | U | U | U | U | U | U |
| n-Butylbenzene | U | U | U | U | U | U | U | U | U | U | U | U |
| n-Propylbenzene | U | U | U | U | U | U | U | U | U | U | U | U |
| o-Xylene | U | U | U | U | U | U | U | U | U | U | U | U |
| sec-Butylbenzene | U | U | U | U | U | U | U | U | U | U | U | U |
| Styrene | U | U | U | U | U | U | U | U | U | U | U | U |
| tert-Butylbenzene | U | U | U | U | U | U | U | U | U | U | U | U |
| Tetrachloroethene | 55 | U | 1.7J | 1.3J | U | 3.3J | 19J | U | U | U | U | 4.5J |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.

GMEI-00455

**Table 1:** Volatile Organic Analysis Results-Soil (Page 3 of 4)
36 Sylvester Street Site 01-30-043U

| Sample ID | UIW-001-SSC18 | UIW-002-SSC22 |
|---|---|---|
| *Unit* | µg/Kg | µg/Kg |
| **Semi-Volatile Organic Analytes:** | | |
| 1,2,4-Trichlorobenzene | U | U |
| 1,2-Dichlorobenzene | U | U |
| 1,3-Dichlorobenzene | U | U |
| 1,4-Dichlorobenzene | 300J | U |
| 2,4-Dinitrotoluene | U | U |
| 2,6-Dinitrotoluene | U | U |
| 2-Chloronapthalene | U | U |
| 2-Methylnaphthalene | U | U |
| 2-Nitroaniline | U | U |
| 3-Nitroaniline | U | U |
| 4-Chloroaniline | 140J | U |
| 4-Chlorophenyl ether | U | U |
| Acenaphthene | U | U |
| Acenapthene | U | U |
| Bis(2-Chloroethoxy)methane | U | U |
| Bis(2-Chloroethyl)ether | U | U |
| Bis(2-Chloroisopropyl)ether | U | U |
| Dibenzofuran | U | U |
| Diethylphtalate | U | U |
| Dimethylphtalate | U | U |
| Hexachlorobutadiene | U | U |
| Hexachloroethane | U | U |
| Hexaclorocyclopentadiene | U | U |
| Isophorone | U | U |
| Naphthalene | U | U |
| Nitrobenzene | U | U |
| N-Nitroso-di-n-Propylamine | U | U |

| Sample ID | UIW-001-SSC18 | UIW-002-SSC22 |
|---|---|---|
| *Unit* | µg/Kg | µg/Kg |
| **Semi-Volatile Organic Analytes:** | | |
| Fluorene | 51J | U |
| 1,2-Diphenylhydrazine | U | U |
| 3,3-Dichlorobenzidine | U | U |
| 4-Bromophenyl-phenylether | U | U |
| 4-Nitroaniline | U | U |
| Anthracene | 69J | U |
| Benzo-a-Anthracene | U | U |
| Benzo-a-Pyrene | U | U |
| Benzo-b-Fluoroanthene | U | U |
| Benzo-g,h,i-Perylene | U | U |
| Benzo-k-Fluoroanthene | U | U |
| Bis(2-Ethylhexyl)Phthalate | 310J | 570 |
| Butylbenzylphthalate | U | U |
| Carbazole | U | U |
| Chrysene | U | U |
| Dibenzo-a,h-Anthracene | U | U |
| Di-n-Butylphthalate | U | U |
| Di-n-Octylphthalate | U | U |
| Fluoranthene | 250J | U |
| Hexaclorobenzene | U | U |
| Indeno(1,2,3-c,d)Pyrene | U | U |
| m.p-Cresol | U | U |
| N-Nitrosodiphenylamine | U | U |
| o-Cresol | U | U |
| Phenanthrene | 310J | U |
| Pyrene | 290J | U |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.

GMEI-00456

**Table 1:** Volatile Organic Analysis Results-Soil (Page 4 of 4)
36 Sylvester Street Site 01-30-043U

| Sample ID | UIW-001-SSC18 | UIW-002-SSC22 |
|---|---|---|
| *Unit* | *mg/Kg* | *mg/Kg* |
| **Inorganic Analytes:** | | |
| Alumimium | 2870.0 | 683 |
| Antimony | 1.9B | 0.62U |
| Arsenic | 1.5 | 0.57U |
| Barium | 46.4 | 17.5B |
| Beryllium | 0.22B | 0.16U |
| Cadmium | 6.8 | 0.11U |
| Calcium | 2090.0 | 347B |
| Chromium | 81.3 | 2.40 |
| Cobalt | 1.9B | 0.27B |
| Copper | 961.0 | 17.1 |
| Iron | 3410.0 | 2150.0 |
| Lead | 255.0 | 7.9 |
| Magnesium | 967.0 | 107B |
| Manganese | 113.0 | 4.4 |
| Mercury | 1.75 | 0.04U |
| Nickel | 10.3 | 0.88U |
| Potassium | 126B | 46.1B |
| Selenium | 0.84 | 0.34U |
| Silver | 7.3 | 0.21B |
| Sodium | 148B | 62.1B |
| Thallium | 0.71U | 0.55U |
| Vanadium | 6.2B | 2.0B |
| Zinc | 331.0 | 9.2 |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.

**Table 2:** Detected Analytes and Applicable SCGs-Soil (Page 1 of 2)
36 Sylvester Street Site 01-30-043U

| Sample ID | UIW-001-SSC18 | UIW-001-SS20 | UIW-001-SS22 | UIW-001-SS24 | UIW-001-SS32 | UIW-001-SS45 | UIW-002-SSC22 | UIW-002-SS24 | UIW-002-SS26 | UIW-002-SS28 | UIW-002-SS32 | UIW-002-SS45 | Applicable SCG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Unit* | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg |
| **Volatile Organic Analytes:** | | | | | | | | | | | | | |
| Acetone | U | 8.5B | 6.1U | 4.3JB | U | U | 16JB | U | U | U | 6B | 7.7B | 200 |
| Methylene Chloride | 3.9J | U | U | 3J | 1.2J | 1.3J | 12J | 2.5J | 2.5J | 2.8J | U | 3J | 100 |
| 1,2,4-Trimethylbenzene | 140 | U | U | U | U | U | U | U | U | U | U | U | 13,000 |
| 1,3,5-Trimethylbenzene | 93 | U | U | U | U | U | U | U | U | U | U | U | 3,300 |
| 1,4-Dichlorobenzene | 900 | U | U | U | U | U | U | U | U | U | U | U | 8,500 |
| Tetrachloroethene | 55 | U | 1.7J | 1.3J | U | 3.3J | 19J | U | U | U | U | 4.5J | 1,400 |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.
Red concentration repersents an SCG excedence.

GMEI-00458

**Table 2:** Detected Analytes and Applicable SCGs-Soil (Page 2 of 2)
36 Sylvester Street Site 01-30-043U

| Sample ID | UIW-001-SSC18 | UIW-002-SSC22 | Applicable SCG |
|---|---|---|---|
| *Unit* | µg/Kg | µg/Kg | µg/Kg |
| **Semi-Volatile Organic Analytes:** | | | |
| 1,4-Dichlorobenzene | 300J | U | NA |
| 4-Chloroaniline | 140J | U | 220 |
| Fluorene | 51J | U | 50,000 |
| Anthracene | 69J | U | 50,000 |
| Bis(2-Ethylhexyl)Phthalate | 310J | 570 | 50,000 |
| Fluoranthene | 250J | U | 50,000 |
| Phenanthrene | 310J | U | 50,000 |
| Pyrene | 290J | U | 50,000 |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.
Red concentration repersents an SCG excedence.

| Sample ID | UIW-001-SSC18 | UIW-002-SSC22 | Applicable SCG | Background Levels |
|---|---|---|---|---|
| *Unit* | *mg/Kg* | *mg/Kg* | *mg/Kg* | *mg/Kg* |
| **Inorganic Analytes:** | | | | |
| Alumimium | 2870.0 | 683 | SB | 33000 |
| Antimony | 1.9B | 0.62U | SB | NA |
| Arsenic | 1.5 | 0.57U | 7.5 or SB | 12 |
| Barium | 46.4 | 17.5B | 300 or SB | 600 |
| Beryllium | 0.22B | 0.16U | 0.16 or SB | 1.75 |
| Cadmium | 6.8 | 0.11U | 10 or SB | 1 |
| Calcium | 2090.0 | 347B | SB | 35,000 |
| Chromium | 81.3 | 2.40 | 10 or SB | 40 |
| Cobalt | 1.9B | 0.27B | 30 or SB | 60 |
| Copper | 961.0 | 17.1 | 25 or SB | 50 |
| Iron | 3410.0 | 2150.0 | 2000 or SB | 550,000 |
| Lead | 255.0 | 7.9 | SB | 500 |
| Magnesium | 967.0 | 107B | SB | 5000 |
| Manganese | 113.0 | 4.4 | SB | 5,000 |
| Mercury | 1.75 | 0.04U | 0 | 0.2 |
| Nickel | 10.3 | 0.88U | 13 or SB | 25 |
| Potassium | 126B | 46.1B | SB | 43000 |
| Selenium | 0.84 | 0.34U | 2 or SB | 3.9 |
| Silver | 7.3 | 0.21B | SB | NA |
| Sodium | 148B | 62.1B | SB | 8000 |
| Thallium | 0.71U | 0.55U | SB | NA |
| Vanadium | 6.2B | 2.0B | 150 or SB | 300 |
| Zinc | 331.0 | 9.2 | 20 or SB | 50 |

**Table 3:** Groundwater Analytical Results and SCGs (Page 1 of 6)
36 Sylvester Street Site 01-30-043U

| **Sample ID** | UIW-001-GW60 | UIW-001-GW70 | UIW-001-GW80 | UIW-001-GWFLD | UIW-002-GW60 | UIW-002-GW70 | UIW-002-GW80 | UIW-002-GWFLD | Trip Blank | **Applicable SCG** |
|---|---|---|---|---|---|---|---|---|---|---|
| *Unit* | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg |
| **Volatile Organic Analytes:** | | | | | | | | | | |
| Chloromethane | U | U | U | U | U | U | U | U | U | NA |
| Vinyl Chloride | U | U | U | U | U | U | U | U | U | 2 |
| Bromomethane | U | U | U | U | U | U | U | U | U | 5 |
| Chloroethane | 7.7 | 13 | 21 | U | 9 | 3.9 | U | U | U | 5 |
| Trichlorofluoromethane | U | U | U | U | U | U | U | U | U | 5 |
| 1,1-Dichloroethene | 320E | 740E | 90 | U | 240E | 430E | 79 | U | U | 5 |
| Methylene Chloride | U | U | U | U | U | U | U | 2 | U | 5 |
| trans-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | 5 |
| cis-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | 5 |
| 1,1-Dichloroethane | 520E | 1000E | 130E | U | 710E | 450E | 61 | U | U | 5 |
| Chloroform | U | U | U | U | U | U | U | U | U | 7 |
| 1,1,1-Trichloroethane | 2400E | 1800E | 330E | 1.8 | 2500E | 2400E | 330E | U | U | 5 |
| Carbon Tetrachloride | U | U | U | U | U | U | U | U | U | 5 |
| Benzene | U | U | U | U | U | U | U | U | U | 0.7 |
| 1,2-Dichloroethane | U | U | U | U | U | U | U | U | U | 0.6 |
| Trichloroethene | 170E | 520E | 240E | U | 120E | 470E | 1100E | U | U | 5 |
| 1,2-Dichloropropane | U | U | U | U | U | U | U | U | U | 1 |
| Bromodichloromethane | U | U | U | U | U | U | U | U | U | 50 |
| 2-Chloroethyl Vinyl Ether | U | U | U | U | U | U | U | U | U | NA |
| t-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | 0.4 |
| Toluene | U | U | U | U | U | U | U | U | U | 5 |
| cis-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | 0.4 |
| 1,1,2-Trichloroethane | 0.9 | U | 3.7 | U | U | 2.4 | U | U | U | 1 |
| Tetrachloroethene | 15 | 61 | U | U | 8 | 49 | 57 | U | U | 5 |
| Dibromochloromethane | U | U | U | U | U | U | U | U | U | 50 |
| Chlorobenzene | U | U | U | U | U | U | U | U | U | 5 |
| Ethylbenzene | U | U | U | U | U | U | U | U | U | 5 |
| o-Xylene | U | U | U | U | U | U | U | U | U | 5 |
| m+p Xylenes | U | U | U | U | U | U | U | U | U | 5 |
| Bromoform | U | U | U | U | U | U | U | U | U | 50 |
| 1,1,2,2-Tetrachloroethane | U | U | U | U | U | U | U | U | U | 5 |
| 1,3-Dichlorobenzene | U | U | U | U | U | U | U | U | U | 3 |
| 1,4-Dichlorobenzene | U | U | U | U | U | U | U | U | U | 3 |
| 1,2-Dichlorobenzene | U | U | U | U | U | U | U | U | U | 3 |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.

**Table 3:** Groundwater Analytical Results and SCGs (Page 2 of 6)
36 Sylvester Street Site 01-30-043U

| **Sample ID** | FLD BLK (7-9-01) | GP-003-GW60 | GP-003-GW70 | GP-003-GW80 | GP-004-GW60 | GP-004-GW70 | GP-004-GW80 | GP-005-GW60 | GP-005-GW70 | GP-005-GW80 | **Applicable SCG** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Unit* | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg |
| **Volatile Organic Analytes:** | | | | | | | | | | | |
| Chloromethane | U | U | U | U | U | U | U | U | U | U | NA |
| Vinyl Chloride | U | U | U | U | U | U | U | U | U | U | 2 |
| Bromomethane | U | U | U | U | U | U | U | U | U | U | 5 |
| Chloroethane | U | U | U | U | U | U | U | U | U | U | 5 |
| Trichlorofluoromethane | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,1-Dichloroethene | U | 34 | 12 | 5.6 | 130E | 33 | 21 | 200E | 53 | 17 | 5 |
| Methylene Chloride | 1.2 | U | U | U | U | U | U | U | U | U | 5 |
| trans-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | U | 5 |
| cis-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,1-Dichloroethane | U | 68 | 15 | U | 220E | 82 | 26 | 570E | 76 | 8.2 | 5 |
| Chloroform | U | U | U | U | U | U | U | U | U | U | 7 |
| 1,1,1-Trichloroethane | 3.9 | 180E | 43 | 17 | 850E | 140E | 59B | 940E | 200E | 45B | 5 |
| Carbon Tetrachloride | U | U | U | U | U | U | U | U | U | U | 5 |
| Benzene | U | U | U | U | U | U | U | U | U | U | 0.7 |
| 1,2-Dichloroethane | U | U | U | U | U | U | U | U | U | U | 0.6 |
| Trichloroethene | U | 320E | 44 | 14 | 1100E | 420E | 93 | 240E | 960E | 600E | 5 |
| 1,2-Dichloropropane | U | U | U | U | U | U | U | U | U | U | 1 |
| Bromodichloromethane | U | U | U | U | U | U | U | U | U | U | 50 |
| 2-Chloroethyl Vinyl Ether | U | U | U | U | U | U | U | U | U | U | NA |
| t-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | U | 0.4 |
| Toluene | U | U | U | 5.2 | U | U | U | U | U | U | 5 |
| cis-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | U | 0.4 |
| 1,1,2-Trichloroethane | U | U | U | U | U | U | U | U | U | U | 1 |
| Tetrachloroethene | U | 33 | U | U | 37 | 17 | 4.7 | 13 | 41 | 16 | 5 |
| Dibromochloromethane | U | U | U | U | U | U | U | U | U | U | 50 |
| Chlorobenzene | U | U | U | U | U | U | U | U | U | U | 5 |
| Ethylbenzene | U | U | U | 1.9 | U | U | U | U | U | U | 5 |
| o-Xylene | U | U | U | 2.4 | U | U | U | U | U | U | 5 |
| m+p Xylenes | U | U | U | 5.9 | U | U | U | U | U | U | 5 |
| Bromoform | U | U | U | U | U | U | U | U | U | U | 50 |
| 1,1,2,2-Tetrachloroethane | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,3-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |
| 1,4-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |
| 1,2-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.

GMEI-00461

**Table 3:** Groundwater Analytical Results and SCGs (Page 3 of 6)
36 Sylvester Street Site 01-30-043U

| Sample ID | GP-006-GW60 | GP-006-GW70 | GP-006-GW80 | FLD BLK (7-10-01) | GP-007-GW60 | GP-007-GW70 | GP-007-GW80 | GP-008-GW60 | GP-008-GW70 | GP-008-GW80 | Applicable SCG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Unit* | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg |
| **Volatile Organic Analytes:** | | | | | | | | | | | |
| Chloromethane | U | U | U | U | U | U | U | U | U | U | NA |
| Vinyl Chloride | U | U | U | U | U | U | U | U | U | U | 2 |
| Bromomethane | U | U | U | U | U | U | U | U | U | U | 5 |
| Chloroethane | U | U | U | U | U | U | U | U | U | U | 5 |
| Trichlorofluoromethane | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,1-Dichloroethene | 550E | 52 | 42 | U | 600E | 82 | 77 | 290E | 380E | 78 | 5 |
| Methylene Chloride | U | U | U | U | U | U | U | U | U | U | 5 |
| cis-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | U | 5 |
| trans-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,1-Dichloroethane | 580E | 47 | 37 | U | 930E | 54 | 68 | 420E | 450E | 62 | 5 |
| Chloroform | U | U | U | U | U | U | U | U | U | U | 7 |
| 1,1,1-Trichloroethane | 1900E | 230E | 140E | U | 2500E | 280E | 290E | 1500E | 1900E | 240E | 5 |
| Carbon Tetrachloride | U | U | U | U | U | U | U | U | U | U | 5 |
| Benzene | U | U | U | U | U | U | U | U | U | U | 0.7 |
| 1,2-Dichloroethane | U | U | U | U | U | U | U | U | U | U | 0.6 |
| Trichloroethene | 360E | 610E | 450E | U | 310E | 870E | 1200E | 410E | 660E | 1300E | 5 |
| 1,2-Dichloropropane | U | U | U | U | U | U | U | U | U | U | 1 |
| Bromodichloromethane | U | U | U | U | U | U | U | U | U | U | 50 |
| 2-Chloroethyl Vinyl Ether | U | U | U | U | U | U | U | U | U | U | NA |
| t-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | U | 0.4 |
| Toluene | U | U | U | U | U | U | U | U | U | U | 5 |
| cis-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | U | 0.4 |
| 1,1,2-Trichloroethane | U | U | U | U | U | U | U | U | U | U | 1 |
| Tetrachloroethene | 38 | 42 | 14 | U | 32 | 50 | 72 | 21 | 44 | 60 | 5 |
| Dibromochloromethane | U | U | U | U | U | U | U | U | U | U | 50 |
| Chlorobenzene | U | U | U | U | U | U | U | U | U | U | 5 |
| Ethylbenzene | U | U | U | U | U | U | U | U | U | U | 5 |
| o-Xylene | U | U | U | U | U | U | U | U | U | U | 5 |
| m+p Xylenes | U | U | U | U | U | U | U | U | U | U | 5 |
| Bromoform | U | U | U | U | U | U | U | U | U | U | 50 |
| 1,1,2,2-Tetrachloroethane | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,3-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |
| 1,4-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |
| 1,2-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.

**Table 3:** Groundwater Analytical Results and SCGs (Page 4 of 6)
36 Sylvester Street Site 01-30-043U

| Sample ID | GP-009-GW60 | GP-009-GW70 | GP-009-GW80 | GP-010-GW60 | GP-010-GW70 | GP-010-GW80 | FLD BLK (7-11-01) | GP-011-GW60 | GP-011-GW70 | GP-011-GW80 | Applicable SCG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Unit* | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg |
| **Volatile Organic Analytes:** | | | | | | | | | | | |
| Chloromethane | U | U | U | U | U | U | U | U | U | U | NA |
| Vinyl Chloride | U | U | U | U | U | U | U | U | U | U | 2 |
| Bromomethane | U | U | U | U | U | U | U | U | U | U | 5 |
| Chloroethane | 13 | 12 | U | U | U | U | U | U | U | U | 5 |
| Trichlorofluoromethane | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,1-Dichloroethene | 390E | 400E | 170E | 130 | 92 | 77 | U | 16 | 13 | 14 | 5 |
| Methylene Chloride | 12B | 11B | 9.7B | 43B | 9.4B | 9.9B | 11B | 10B | 8.7B | 8.9B | 5 |
| trans-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | U | 5 |
| cis-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,1-Dichloroethane | 480E | 400E | 140E | 340 | 170E | 130E | U | 21 | 21 | 21 | 5 |
| Chloroform | U | U | U | U | U | U | U | U | U | U | 7 |
| 1,1,1-Trichloroethane | 770E | 710E | 440E | 110B | 260E | 250E | 1.9B | 59B | 53B | 55 | 5 |
| Carbon Tetrachloride | U | U | U | U | U | U | U | U | U | U | 5 |
| Benzene | U | U | U | U | U | U | U | U | U | U | 0.7 |
| 1,2-Dichloroethane | U | U | U | U | U | U | U | U | U | U | 0.6 |
| Trichloroethene | 380E | 500E | 700E | 150 | 120E | 13 | U | 4 | 3.7 | 4.8 | 5 |
| 1,2-Dichloropropane | U | U | U | U | U | U | U | U | U | U | 1 |
| Bromodichloromethane | U | U | U | U | U | U | U | U | U | U | 50 |
| 2-Chloroethyl Vinyl Ether | U | U | U | U | U | U | U | U | U | U | NA |
| t-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | U | 0.4 |
| Toluene | U | U | U | U | U | U | U | U | U | U | 5 |
| cis-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | U | 0.4 |
| 1,1,2-Trichloroethane | U | U | 2.7 | U | 3.3 | 2.4 | U | U | U | U | 1 |
| Tetrachloroethene | 34 | 48 | 66 | 21 | 18 | 15 | U | 4.7 | 3.3 | 4 | 5 |
| Dibromochloromethane | U | U | U | U | U | U | U | U | U | U | 50 |
| Chlorobenzene | U | U | U | U | U | U | U | U | U | U | 5 |
| Ethylbenzene | U | U | U | U | U | U | U | U | U | U | 5 |
| o-Xylene | U | U | U | U | U | U | U | U | U | U | 5 |
| m+p Xylenes | U | U | U | U | U | U | U | U | U | U | 5 |
| Bromoform | U | U | U | U | U | U | U | U | U | U | 50 |
| 1,1,2,2-Tetrachloroethane | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,3-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |
| 1,4-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |
| 1,2-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.

GMEI-00463

**Table 3:** Groundwater Analytical Results and SCGs (Page 5 of 6)
36 Sylvester Street Site 01-30-043U

| Sample ID | GP-012-GW60 | GP-012-GW70 | GP-012-GW80 | GP-013-GW60 | GP-013-GW70 | GP-013-GW80 | GP-014-GW60 | GP-014-GW70 | GP-014-GW80 | FLD BLK (7-12-01) | Applicable SCG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Unit* | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg |
| **Volatile Organic Analytes:** | | | | | | | | | | | |
| Chloromethane | U | U | U | U | U | U | U | U | U | U | NA |
| Vinyl Chloride | U | U | U | U | U | U | U | U | U | U | 2 |
| Bromomethane | U | U | U | U | U | U | U | U | U | U | 5 |
| Chloroethane | U | U | U | U | U | U | U | U | U | U | 5 |
| Trichlorofluoromethane | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,1-Dichloroethene | 10 | 8.5 | 9.4 | 16 | 4.9 | U | 9.6 | 6.2 | 9.4 | U | 5 |
| Methylene Chloride | 5.1B | 8.7B | 8.7B | 3.4B | 3B | 9B | 4.2B | 2.9B | 3.2B | 5.9B | 5 |
| trans-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | U | 5 |
| cis-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,1-Dichloroethane | 43 | 8.4 | 3.3 | 73 | U | U | 22 | U | U | U | 5 |
| Chloroform | U | U | U | U | U | U | U | U | U | U | 7 |
| 1,1,1-Trichloroethane | 13B | 8B | 16B | 45B | 5.2B | 4.4B | 15B | 9.3B | 10B | 2.6B | 5 |
| Carbon Tetrachloride | U | U | U | U | U | U | U | U | U | U | 5 |
| Benzene | U | U | U | U | U | U | U | U | U | U | 0.7 |
| 1,2-Dichloroethane | U | U | U | U | U | U | U | U | U | U | 0.6 |
| Trichloroethene | U | U | 1.1 | 3.6 | 1.6 | U | 12 | 9.5 | 11 | U | 5 |
| 1,2-Dichloropropane | U | U | U | U | U | U | U | U | U | U | 1 |
| Bromodichloromethane | U | U | U | U | U | U | U | U | U | U | 50 |
| 2-Chloroethyl Vinyl Ether | U | U | U | U | U | U | U | U | U | U | NA |
| t-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | U | 0.4 |
| Toluene | U | U | U | U | U | U | U | U | U | U | 5 |
| cis-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | U | 0.4 |
| 1,1,2-Trichloroethane | U | U | U | U | U | U | U | U | U | U | 1 |
| Tetrachloroethene | U | U | 1.4 | 3.3 | U | U | 1.4 | 1 | 1.3 | U | 5 |
| Dibromochloromethane | U | U | U | U | U | U | U | U | U | U | 50 |
| Chlorobenzene | U | U | U | U | U | U | U | U | U | U | 5 |
| Ethylbenzene | U | U | U | U | U | U | U | U | U | U | 5 |
| o-Xylene | U | U | U | U | U | U | U | U | U | U | 5 |
| m+p Xylenes | U | U | U | U | U | U | U | U | U | U | 5 |
| Bromoform | U | U | U | U | U | U | U | U | U | U | 50 |
| 1,1,2,2-Tetrachloroethane | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,3-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |
| 1,4-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |
| 1,2-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.

GMEI-00464

**Table 3:** Groundwater Analytical Results and SCGs (Page 6 of 6)
36 Sylvester Street Site 01-30-043U

| **Sample ID** | GP-015-GW60 | GP-015-GW70 | GP-015-GW80 | GP-016-GW60 | GP-016-GW70 | GP-016-GW80 | GP-017-GW60 | GP-017-GW70 | GP-017-GW80 | Trip Blk (7-12-01) | **Applicable SCG** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Unit* | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg | µg/Kg |
| **Volatile Organic Analytes:** | | | | | | | | | | | |
| Chloromethane | U | U | U | U | U | U | U | U | U | U | NA |
| Vinyl Chloride | U | U | U | U | U | U | U | U | U | U | 2 |
| Bromomethane | U | U | U | U | U | U | U | U | U | U | 5 |
| Chloroethane | U | U | U | U | U | U | U | U | U | U | 5 |
| Trichlorofluoromethane | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,1-Dichloroethene | 32 | 26 | 14 | 33 | 32 | 31 | 22 | 26 | 23 | U | 5 |
| Methylene Chloride | 5.1B | 4.5B | 4.1B | 5.7B | 6.6B | 5B | 4.8B | 6.8B | 6.9B | 10B | 5 |
| trans-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | U | 5 |
| cis-1,2-Dichloroethene | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,1-Dichloroethane | 60 | 29 | 5.4 | 31 | 48 | 34 | 21 | 17 | 12 | U | 5 |
| Chloroform | U | U | U | U | U | U | U | U | U | U | 7 |
| 1,1,1-Trichloroethane | 80B | 100B | 31B | 130E | 160E | 150E | 120E | 60B | 51B | 2.3B | 5 |
| Carbon Tetrachloride | U | U | U | U | U | U | U | U | U | U | 5 |
| Benzene | U | U | U | U | U | U | U | U | U | U | 0.7 |
| 1,2-Dichloroethane | U | U | U | U | U | U | U | U | U | U | 0.6 |
| Trichloroethene | 560E | 490E | 140E | 230E | 190E | 190E | 100E | 140E | 220E | U | 5 |
| 1,2-Dichloropropane | U | U | U | U | U | U | U | U | U | U | 1 |
| Bromodichloromethane | U | U | U | U | U | U | U | U | U | U | 50 |
| 2-Chloroethyl Vinyl Ether | U | U | U | U | U | U | U | U | U | U | NA |
| t-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | U | 0.4 |
| Toluene | U | U | U | U | U | U | U | U | U | U | 5 |
| cis-1,3-Dichloropropene | U | U | U | U | U | U | U | U | U | U | 0.4 |
| 1,1,2-Trichloroethane | U | U | U | U | U | U | U | U | U | U | 1 |
| Tetrachloroethene | 36 | 20 | 6.3 | 29 | 21 | 24 | 25 | 12 | 13 | U | 5 |
| Dibromochloromethane | U | U | U | U | U | U | U | U | U | U | 50 |
| Chlorobenzene | U | U | U | U | U | U | U | U | U | U | 5 |
| Ethylbenzene | U | U | U | U | U | U | U | U | U | U | 5 |
| o-Xylene | U | U | U | U | U | U | U | U | U | U | 5 |
| m+p Xylenes | U | U | U | U | U | U | U | U | U | U | 5 |
| Bromoform | U | U | U | U | U | U | U | U | U | U | 50 |
| 1,1,2,2-Tetrachloroethane | U | U | U | U | U | U | U | U | U | U | 5 |
| 1,3-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |
| 1,4-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |
| 1,2-Dichlorobenzene | U | U | U | U | U | U | U | U | U | U | 3 |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.

**Table 4:** Soil Endpoint Analytical Results (Page 1 of 3)
36 Sylvester Street Site 01-30-043U

| **Sample ID** | 00-096-001-EP-20' |
|---|---|
| *Unit* | µg/Kg |
| **Volatile Organic Analytes:** | |
| Chloromethane | U |
| Bromomethane | U |
| Vinyl Chloride | U |
| Chloroethane | U |
| Methylene Chloride | U |
| Acetone | U |
| Carbon Disulfide | U |
| 1,1-Dichloroethene | U |
| 1,1-Dichloroethane | U |
| Trans-1,2-Dichloroethene | U |
| cis-1,2-Dichloroethene | U |
| Chloroform | U |
| 1,2-Dichloroethane | U |
| 2-Butanone | U |
| 1,1,1-Trichloroethane | U |
| Carbon Tetrachloride | U |
| Bromodichloromethane | U |
| 1,2-Dichloropropane | U |
| cis-1,3-Dichloropropene | U |
| Trichloroethene | U |
| Dibromochloromethane | U |
| 1,1,2-Trichloroethane | U |
| Benzene | U |
| trans-1,3-Dichloropropene | U |
| Bromoform | U |
| 4-Methyl-2-Pentanone | U |
| 2-Hexanone | U |
| Tetrachloroethene | U |
| 1,1,2,2-Tetrachloroethane | U |
| Toluene | U |
| Chlorobenzene | U |
| Ethyl benzene | U |
| Styrene | U |
| m+p-Xylenes | U |
| o-Xylene | U |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.

**Table 4:** Soil Endpoint Analytical Results (Page 2 of 3)
36 Sylvester Street Site 01-30-043U

| Sample ID | 00-096-001-EP-20' |
|---|---|
| *Unit* | µg/Kg |
| **Semi-Volatile Organic Analytes:** | |
| Bis(2-Chloroethyl)ether | U |
| 1,2-Dichlorobenzene | U |
| 1,3-Dichlorobenzene | U |
| 1,4-Dichlorobenzene | U |
| 2,2'-oxybis (1-chloropropane) | U |
| N-Nitroso-di-n-Propylamine | U |
| Hexachloroethane | U |
| Nitrobenzene | U |
| Isophorone | U |
| Bis(2-Chloroethoxy)methane | U |
| 1,2,4-Trichlorobenzene | U |
| Naphthalene | U |
| 4-Chloroaniline | U |
| Hexachlorobutadiene | U |
| 2-Methylnaphthalene | U |
| Hexaclorocyclopentadiene | U |
| 2-Chloronapthalene | U |
| 2-Nitroaniline | U |
| Dimethylphtalate | U |
| Acenaphthylene | U |
| 2,6-Dinitrotoluene | U |
| 3-Nitroaniline | U |
| Acenapthene | U |
| Dibenzofuran | U |
| 2,4-Dinitrotoluene | U |

| Sample ID | 00-096-001-EP-20' |
|---|---|
| *Unit* | µg/Kg |
| **Semi-Volatile Organic Analytes:** | |
| Diethylphtalate | U |
| 4-Chlorophenyl phenylether | U |
| Fluorene | U |
| 4-Nitroaniline | U |
| N-Nitrosodiphenylamine | U |
| 4-Bromophenyl-phenylether | U |
| Hexachlorobenzene | U |
| Phenanthrene | U |
| Anthracene | U |
| Carbazole | U |
| Di-n-Octylphthalate | U |
| Fluoranthene | U |
| Pyrene | U |
| Butylbenzylphthalate | U |
| 3,3'-Dichlorobenzidine | U |
| Benzo-a-Anthracene | U |
| Chrysene | U |
| Bis(2-Ethylhexyl)Phthalate | U |
| Di-n-octyl phthalate | U |
| Benzo-b-Fluoroanthene | U |
| Benzo-k-Fluoroanthene | U |
| Benzo-a-Pyrene | U |
| Indeno(1,2,3-c,d)Pyrene | U |
| Dibenzo-a,h-Anthracene | U |
| Benzo-g,h,i-Perylene | U |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.

**Table 4:** Soil Endpoint Analytical Results (Page 3 of 3)
36 Sylvester Street Site 01-30-043U

| Sample ID | 00-096-001-EP-20' |
|---|---|
| *Unit* | *mg/Kg* |
| Inorganic Analytes: | |
| Alumimium | 889.0 |
| Antimony | U |
| Arsenic | 0.49B |
| Barium | 9.6B |
| Beryllium | 0.12B |
| Cadmium | 0.26B |
| Calcium | 289B |
| Chromium | 1.9 |
| Cobalt | 0.22B |
| Copper | 12.3 |
| Iron | 3160 |
| Lead | 2.2 |
| Magnesium | 141B |
| Manganese | 7.3 |
| Mercury | 0.01 |
| Nickel | 0.72B |
| Potassium | 68.8B |
| Selenium | U |
| Silver | U |
| Sodium | 149B |
| Thallium | U |
| Vanadium | 2.9B |
| Zinc | 11.2 |

U: Indicates the comound was analyzed for, but was not detected.

J: Indicates an estimated value detected below the MDL.

E: Indicates the analyte concentration exceeds the instrument calibration limits.

B: Indicates the analyte was identified in the sample blank and the actual sample.

**Table 5:** Detected Analytes in Endpoint Soil and Applicable SCGs
36 Sylvester Street Site 01-30-043U

| Sample ID | 00-096-001-EP-20' | Applicable SCG | Background Levels |
|---|---|---|---|
| *Unit* | *mg/Kg* | *mg/Kg* | *mg/Kg* |
| Inorganic Analytes: | | | |
| Alumimium | 889 | SB | 33,000 |
| Arsenic | 0.49B | 7.5 or SB | 3-12 |
| Barium | 9.6B | 300 or SB | 15-600 |
| Beryllium | 0.12B | 0.16 or SB | 0-1.75 |
| Cadmium | 0.26B | 10 or SB | 0.1-1 |
| Calcium | 289B | SB | 130-35,000 |
| Chromium | 1.9 | 50 or SB | 1.5-40 |
| Cobalt | 0.22B | 30 or SB | 2.5-60 |
| Copper | 12.3 | 25 or SB | 1-50 |
| Iron | 3,160 | 2,000 or SB | 2,000-550,000 |
| Lead | 2.2 | SB | 200-500 |
| Magnesium | 141B | SB | 100-5000 |
| Manganese | 7.3 | SB | 50-5,000 |
| Mercury | 0.01 | 0.1 | 0.002-0.1 |
| Nickel | 0.72B | 13 or SB | 0.5-25 |
| Potassium | 68.8B | SB | 8,500-43,000 |
| Sodium | 149B | SB | 6,000-8,000 |
| Vanadium | 2.9B | 150 or SB | 1-300 |
| Zinc | 11.2 | 20 or SB | 9-50 |

U: Indicates the comound was analyzed for, but was not detected.
J: Indicates an estimated value detected below the MDL.
E: Indicates the analyte concentration exceeds the instrument calibration limits.
B: Indicates the analyte was identified in the sample blank and the actual sample.
Red concentration repersents an SCG excedence.

# APPENDICES

Regarding:

36 Sylvester Street Site
Site Code 1-30-043U
Westbury, New York

September 2002

IMPACT
ENVIRONMENTAL

a division of impact environmental consulting, inc.

1 Village Plaza, Kings Park, New York 11754 ❖ 631.269.8800 telephone ❖ 631. 269.1599 facsimile ❖ impactenvironmental.com

# APPENDIX A
## PHOTOGRAPHIC LOG

36 Sylvester Street Site
Site Code 1-30-043U
Westbury, New York

# Photographic Log

**36 Sylvester Street**
**Site Code 1-30-043U**
**Westbury, New York**

Photo 1

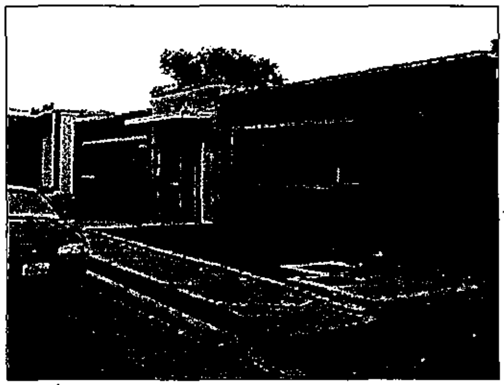
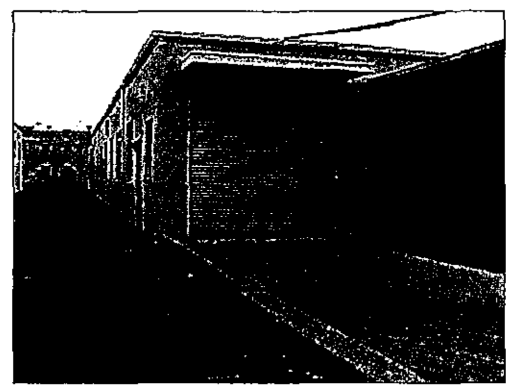


Photo 2

Photo 3

Photo 4



# Photographic Log

**36 Sylvester Street**
**Site Code 1-30-043U**
**Westbury, New York**

Photo 5

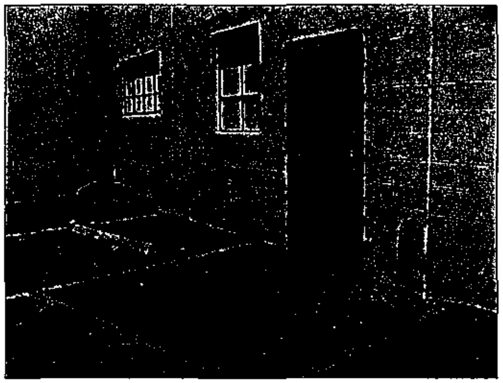


Photo 6

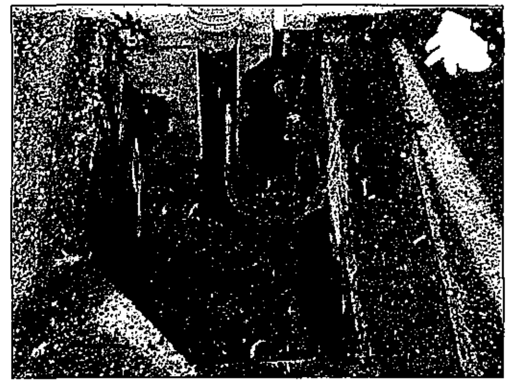


Photo 7

Photo 8

# Photographic Log

**36 Sylvester Street**
**Site Code 1-30-043U**
**Westbury, New York**

Photo 9

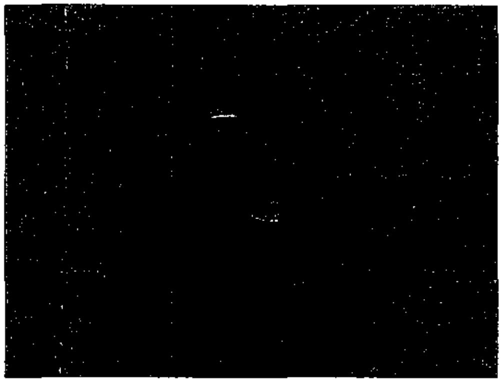


Photo 10

Photo 11

Photo 12

# Photographic Log

**36 Sylvester Street**
**Site Code 1-30-043U**
**Westbury, New York**

Photo 13

Photo 14

Photo 15

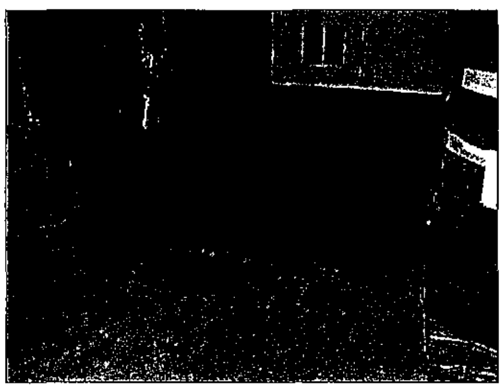
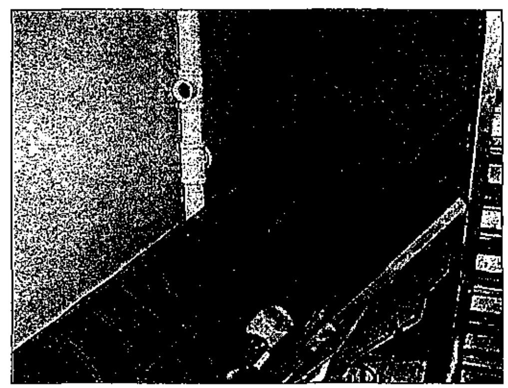


Photo 16



# Photographic Log

**36 Sylvester Street**
**Site Code 1-30-043U**
**Westbury, New York**

Photo 17

Photo 18

Photo 19

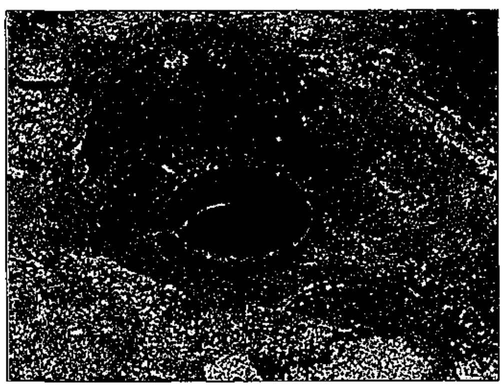
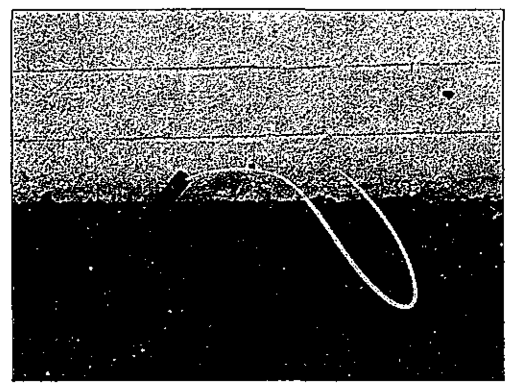


Photo 20



# Photographic Log

36 Sylvester Street
Site Code 1-30-043U
Westbury, New York

Photo 21

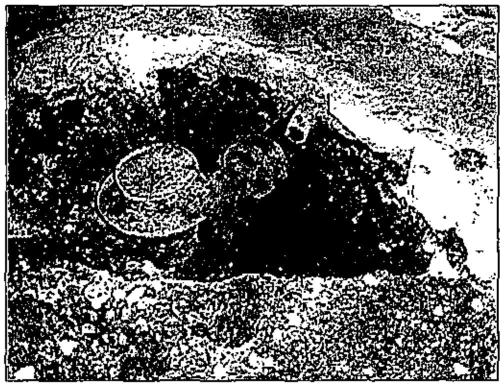


Photo 22

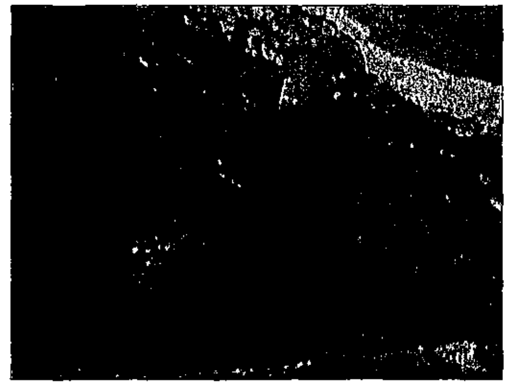


Photo 23

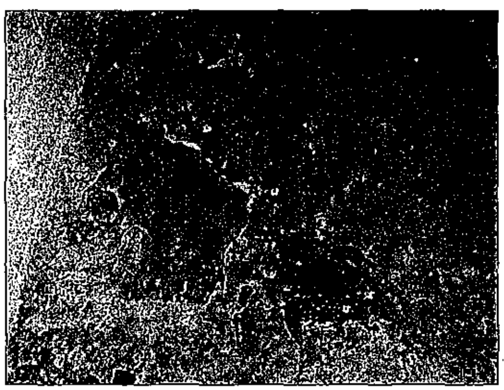
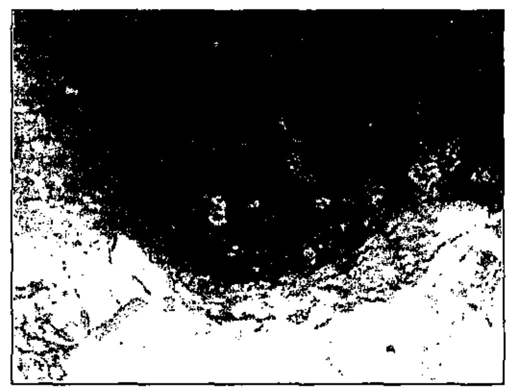


Photo 24



# APPENDIX B
## FIELD NOTES

36 Sylvester Street Site
Site Code 1-30-043U
Westbury, New York

"Rite in the Rain"®
ALL-WEATHER WRITING PAPER

# FIELD

All-Weather Spiral
**No. 353**

| |
|---|
| 00-096 |
| 36 Sylvester St. |
| Westbury, NY |
| Site Code 1-30-043U |

4 5/8" x 7" - 64 Pages

"Site Field Log"

1

3/27/01

Project Meeting

- Richard Parrish
- Kevin Kleaka
- Keith Franzen
- Charles Buccino
- Jim Allen

- Discussed project needs for sampling plan

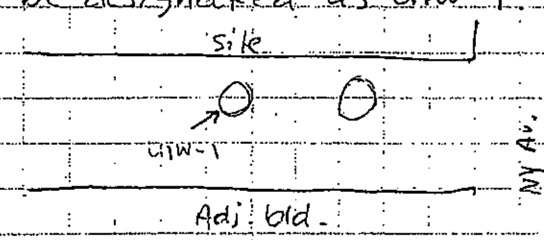
End
3/27/01
KK

3/28/01

$8^{40}$am Arrived on-site. Secured site w/ fencing. Established designated zones. Decon of sampling equipement.

$9^{45}$ Calibrated PID to secure ambient air reading. no response detected (0.0)

$10^{25}$ measurement secured from grade to invert of underground injection well. 13'4" to invert of UIW from the casing of the sampling point. This UIW location will be designated as UIW-1.




Con't Pg. 3

$10^{40}$
Bob Stewart w/ Region 1
of the NYSDEC arrived on
site in replacement of
Richard Lilley

$10^{45}$ First sample secured
from UIW-1. Sample
depth was 13'4" to 16'.
Sampler: CB
sample description:
brown med. sand w/ gravel.
spl is wet (likely due
to port being broken
from plowing).

$10^{55}$ sample 096-UIW-001-SS~~18~~
depth 16'-18'
sampler CB
description:
very dark gray organic layer -
brown med sand

Cont

4

$11^{15}$ spl. 096-UIW-001-SS20
secured (x-ref pg. 2 in MSL)

$11^{25}$ spl. 096-UIW-001-SS22
secured (x-ref. pg 2 in MSL)

$11^{34}$am spl. 096-UIW-001-SS24
secured (x-ref. pg. 2 in MSL)

* Jim Allen arrived on site

$12^{11}$pm Sample 096-UIW-001-SS32
secured (x-ref. pg. 3 in MSL).

$12^{39}$pm Sample 096-UIW-001-SS45
secured (x-ref. pg. 3 in MSL)

- Note: Bob recommended that the 43-45 sampling interval be adjusted to collect soil above the clay layer for UIW-2

Cont

1:15 pm Prepared for groundwater sampling. Decon each probe rod and SP-15 sampler. Prepared poly hose w/ check valve and perostolic pump. Secured fieldblank

1:50 pm Reached 80' w/ Geo. Will retract sheath to expose screen to formation. Screen depth for 1st gw spl will be 76'-80' below grade.

2:30 First gw spl secured from screen interval of 76'-80'. Water slightly turbid. developed water approx 10-15 min w/ perostolic pump in conjunction w/ check valve.

Spl Id 096-UIW-001-GW80

Cont pg 6

2$^{50}$ pm Second gw spl secured
@ 66'-70' below grade.
Spl id 096-UIW-001-GW70
Purging procedure same
as GW80.

3$^{20}$ pm Third gw spl secured
@ 56'-60' below grade
Spl id 096-UIW-001-GW60
Purging same as above.

3$^{30}$ Retracted rods from ground
Decon as retracting.

3$^{50}$ Remove security fencing.

4$^{00}$ Departured from Site.

End
3/28/17
KK

850 am 3/29/01

Arrived on-site Had a vehicle moved from within the sampling area

910 Secured the area with fencing.

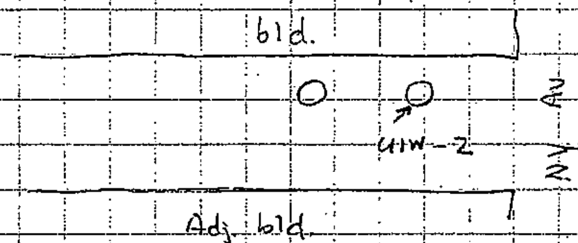
915 Aligned the Geoprobe in position for sampling underground injection well number 2.

920 Prepared designated areas: decon zone, sampling area, sample handling area.

930 Measurement secured from grade to invert (base) of UIW-2. Exactly 18' to invert from the casing of the sampling port.

Cont

Sampling area Sketch




$9^{45}$ am Decon all probe rods and sampling equipement.

$10^{20}$ am Decon complete

$10^{25}$ PID is faulting. Numerous cold starts failed to reactivate the instrument Service is needed and the PID will not be used today to screen soil spls.

Cont

$10^{30}$ Sample 096-UIW-002-SS20 secured (x-ref pg. 5 in MSL)

$10^{40}$ Sample 096-UIW-002-SS22 secured (x-ref pg. 5 in MSL)

$10^{42}$ Samples 096-UIW-002-SS20 and 096-UIW-002-SS22 were composited into one spl. This composite spl. will be labeled as 096-UIW-002-SSC22

* Note: This spl. was split for the NYSDEC.

$10^{55}$ Sample 096-UIW-002-SS24 was secured (x-ref pg. 5 in MSL)

* Note: This spl. was split for the NYSDEC

Cont.

$11^{10}$ Sample 096-UIW-002-SS26
was secured (x-ref pg 6 in MSL)
* This spl was split for the NYSDEC

$11^{25}$ Sample 096-UIW-002-SS28
was secured. (x-ref pg. 6 in MSL)
* This spl was split for the
NYSDEC

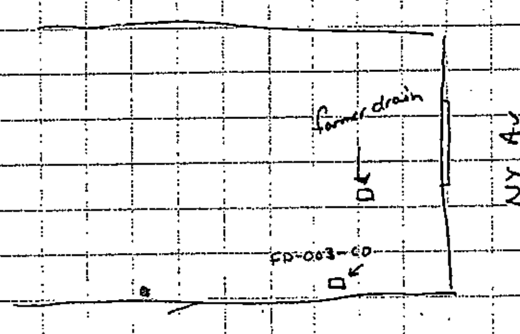
$11^{40}$ Sample 096-UIW-002-SS32
was secured (x-ref pg 6 in MSL)
* This spl was split for the NYSDEC

$12^{05}$ Sample 096-UIW-002-SS43
was secured (x-ref pg 7 in MSL)
* This spl depth interval for changed
as per request of DEC on 3/28
Regarding clay layer identified
@ ~ 43'. DEC requested soil
above this clay layer.
* This spl was not split due to
lack of spl recovery.

Cont

$12^{15}$

Sample 096-FD-003-CO (Cutting Oil)
was secured. This sample
was collected in the floor drain
w/in the bld. Poly-hose was
used to collect said spl. The
other floor drain is not in
existence anymore therefore,
no spl was secured w/ respect
to this former drain




$12^{20}$ Fieldblank spl was secured
before collecting gw spl's.
096-MW-002-GWFLD (3/29/01)

Cont'

$12^{45}$ pm Reached 80' w/ geo to collect gw spl. Will retract sheath to expose screen at 76-80' below grade

$1^{00}$ Joe Jones of the NYSDEC arrived on-site. I explained to him the work progress for the day and tasks remaining. The split spls were given to Joe for the soil collected from today.

$1^{25}$ Joe Jones left site.

$2^{30}$ pm After technical difficulties, the screen was exposed @ 76-80'

$2^{45}$ Sample 096-UIW-002-GW80 was secured. GW was

cont

purged for approx. 10 min. gw
still turbid. However, due
to the silt content at this
depth it was expected that
the purging efforts were
not going to provide a clean
spl. Even the pump failed to
get a clean spl.

3$^{00}$ Joe Jones returned,
accepted GW80 spl.
and left for lunch.

3$^{05}$ Sample 096-U1W-002-GW70
was secured. Purging procedures
conform w/ GW80.

3$^{20}$ Sample 096-U1W-002-GW60
was secured. Purging
procedures conform w/ above

4$^{00}$ Departured from Site

End
3/29/01 FK

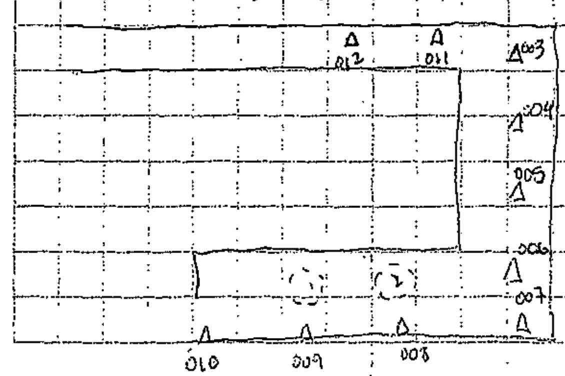
7/9/01

8:30 am Arrived on-site. Surveyed 5 sampling pts on east side of bld as per gw plan.

8:45 Decon all field spl. equipement, designated decon zone, work zone + sample handling area.

9:25 Geoprobe in position to begin drilling at first location for the day.

9:30 Secured field blank spl. from gw sampler prior to drilling (096-FLDBLK-7/9/01)



15

9:57 Purging gw at location GP-003 (~10min).

10:15 am Sample 096-GP-003-GW80 was secured (x-ref pg 8 in MSL)

10:46 Sample 096-GP-003-GW70 was secured (x-ref pg 8 in MSL)

11:07 Sample 096-GP-003-GW60 was secured (x-ref pg 8 in MSL)

12:05 Sample 096-GP-004-GW80 was secured (x-ref pg 8 in MSL).

12:20 Sample 096-GP-004-GW70 was secured (x-ref pg 9 in MSL)

12:35 Sample 096-GP-004-GW60 was secured (x-ref pg 9 in MSL)

→

2:30 Sample 096-GP-005-GW80 was secured (x-ref pg 9 in MSL).

0245 Sample 096-GP-005-GW70
was secured (x-ref pg 9 in MSL).

0305 Sample 096-GP-005-GW~~80~~ 60 [initials]
was secured (x-ref pg ~~9~~ 10 in MSL).

End
7/9/01

7[19] Arrived on-site. Decon all field sampling equip.

Designated work zone + sample handling area.

7[30] Secured field blank spl from gw sampler prior to drilling. (096-FLDBLK-7/10/01)

8[00] Secured sample 096-GP-006-GW80 (x-ref pg 10 in MSL).

8[10] Secured sample 096-GP-006 GW70 (x-ref pg 10 in MSL).

8[20] Secured spl 096-GP-006-GW60 (x-ref pg 10 in MSL)

8[35] Decon all sampling equipement

9[00] Surveyed the balance of gw spl pts on site

Cont

955 Secured spl 096-GP-007-GW80. (x-ref pg 11 in MSL)

10^05 Secured spl 096-GP-007-GW70. (x-ref pg 11 in MSL)

940 Joe Jones of the NYSDEC arrived on-site to oversee field activities.

1015 Secured spl 096-GP-007-GW60 (x-ref pg 11 in MSL).

11^30 Secured spl 096-GP-008-GW80 (x-ref pg 11 in MSL).

1147 Secured spl 096-GP-008-GW70 (x-ref pg 12 in MSL).

1158 Secured spl 096-GP-008-GW60 (x-ref pg 12 in MSL).

Cont

$12^{30}$ Surveyed 5 gw spl points on eastern side of New York Avenue as per work plan.

$1^{10}$ Secured spl 096-GP-009-GW80 (x-ref. pg 12 in MSL).

$1^{25}$ Secured spl 096-GP-009-GW70 (x-ref pg 12 in MSL).

$1^{35}$ Secured spl 096-GP-009-GW60 (x-ref pg 13 in MSL).

$2^{40}$ Secured spl 096-GP-~~009~~ 010 -GW80 (x-ref pg. 13 in MSL)

$2^{55}$ Secured spl 096-GP-010-GW70 (x-ref pg 13 in MSL).

$3^{15}$ Secured spl 096-GP-010-GW60 (x-ref pg 13 in MSL).

Cnf.

20

3:30 Decon all field sampling equipment + left site for the day.

End 7/10/01
KK

7/11/01
6:15

Arrived on-site. Decon all field sampling equip.

Designated work zone and spl area.

7:00 Geoprobe in position for gw spl location 011.

7:30 Storm moving in. Thunder + lightning in area.

8:50 Commence drilling after secured field blank (096-FLDBLK-7/11/01)

9:30 Secured spl. 096-GP-011-GW80 (x-ref pg 14 in MSL).

9:45 Secured spl. 096-GP-011-GW70 (x-ref pg. 14 in MSL).

10:05 Secured spl. 096-GP-011-GW60 (x-ref pg 14 in MSL).

Cont

1145 Secured spl. 096-GP-012-GW80 (X-ref pg 14 in MSL).

1155 Secured spl. 096-GP-012-GW70 (X-ref pg. 15 in MSL).

1205 Secured spl. 096-GP-012-GW60 (X-ref pg 15 in MSL).

205 Secured spl. 096-GP-013-GW80 (X-ref pg 15 in MSL).

220 Secured spl 096-GP-013-GW70 (X-ref pg. 15 in MSL).

230 Secured spl. 096-GP-013-GW60 (X-ref pg. 15 in MSL).

300 Decon field sampling equip. left site for the day

End 7/11/07
KK

7/12/01

7:00 Arrived on-site. Decon gw sampling equip. Designated work zone & sampling area

7:15 Geoprobe in position to begin drilling at location GP-014.

Secured field blank through gw sampler (096-~~GP~~ KH FLDBLK-7/12/01)

7:45 Secured spl. 096-GP-014-GW80 (x-ref pg. 16 in MSL).

7:55 Secured spl. 096-GP-014-GW70 (x-ref pg. 16 in MSL).

8:05 Secured spl. 096-GP-014-GW60 (x-ref pg. 16 in MSL).

9:00 Secured spl. 096-GP-015-GW80 (x-ref pg. 16 in MSL).

Cont.

$9^{15}$ Secured spl. 096-GP-015-6W70 (x-ref pg. 16 in MSL).

$9^{25}$ Secured spl. 096-GP-015-6W60 (x-ref pg 17 in MSL).

$10^{30}$ Secured Spl. 096-GP-016-6W80 (x-ref pg 17 in MSL).

$10^{40}$ Secured spl. 096-GP-016-6W70 (x-ref pg 17 in MSL)

$10^{55}$ Secured spl. 096-GP-016-6W60 (x-ref pg. 17 in MSL).

$12^{10}$ Secured spl. 096-GP-017-6W80 (x-ref pg 17 in MSL)

$12^{25}$ Secured spl. 096-GP-017-6W70 (x-ref pg. 18 in MSL).

$12^{35}$ Secured spl. 096-GP-017-6W60 (x-ref pg 18 in MSL.)

Cal

1:30 Decon field sampling equipment. Left site for the day.

End
7/12/01
KK

"Rite in the Rain"®
ALL-WEATHER WRITING PAPER

# FIELD

All-Weather Spiral
No. 353

| |
|---|
| 00-096 |
| 36 Sylvester St. |
| Westbury, NY |
| Site Code 1-30-043U |

4 5/8" x 7" - 64 Pages

"Master Sample Log"

10^45 am

UIW
Sample ~~096-GP-001-SS16~~

Spl. depth 13'4" - 16' below grade.
Spl. location UIW-1

10^55 am
Sample 096-UIW-001-SS18
@ UIW-1
spl. depth 16'-18' below grade.

11^00 am Samples 096-UIW-001-SS16 and 096-UIW-001-SS18 were composited into one spl. This spl. will be labeled as 096-UIW-001-SSC18

* PID was faulting - No used to analyze spls.

Cont

11[15] Sample 096-U1W-001-SS20
Spl. depth 18'-20' below grade
Sampler: CB
Description:
light brown med.
sand w/ gravel

11[25] Sample 096-U1W-001-SS22
Spl depth 20-22' below grade
sampler CB
description:
brown medium sand
w/ gravel

11[34] Sample 096-U1W-001-SS24
Spl. depth 22'-24' below grade
sampler: CB
description:
light br. medium sand
w/ gravel.

[illegible]

12"pm Sample 096-U1W-001-SS32
Spl. depth: 30'-32' below grade
Sampler: CB
Spl. description:
light brown medium
sand w/ gravel.

12$^{39}$pm Sample 096-U1W-001-SS45
Spl. depth 43-45' below grade
Sampler CB
Spl. description:
~8" clay layer from (silty-clay)
between 43-44'
brown med sand (no
gravel) identified
between 44-45'
* br. med sand @ 44'-45'
selected for analysis

2$^{30}$ GW spl. 096-U1W-001-GW80
secured

2$^{50}$ GW spl. 096-U1W-001-GW70
secured

Cont Pg. 4.

4

$3^{20}$pm Spl 096-U1W-001-GW60 secured

Note: Fieldblank was secured before gw sampling was performed. Lab water was poured down SP-15 sheath into appropriate vessels. The ~~ix~~ spl is labeled as: 096-U1W-001-GWFLD (3/28/07)

End

3/28/07
KK

$10^{30}$ am 3/29/01

Sample 096-41W-002-SS20
Spl. depth 18'-20' belowgrade
Sampler : CB
Spl. description:
brown medium sand
w/ gravel

$10^{40}$ am

Sample 096-41W-002-SS22
Spl. depth: 20'-22' belowgrade
Sampler: CB
Spl. description
brown med sand
w/ gravel

$10^{55}$ am Sample 096-41W-002-SS24
Spl. depth: 22'-24' belowgrade
Sampler: CB
Spl. description:
brown med sand w/
fine to coarse gravel

Cont

11[10] am

Sample 096-U1W-002-SS26
Spl depth 24'-26' below grade
Sampler : CB
Spl description:
brown medium grained
sand w/ fine to coarse
gravel.

11[25] Sample 096-U1W-002-SS28
Spl. depth : 26'-28' below grade
Sampler : CB
Spl. description :
brown sand - medium grain
w/ fine to coarse gravel

11[40] Sample 096-U1W-002-SS32
Spl depth: 30'-32' below grade
Sampler: CB
Spl Description:
brown to reddish brown
medium sand w/ fine to
coarse gravel.

Con't

$12^{05}$ pm Sample 096-UIW-002-SS43
Spl. depth: 41'-43'
Sampler: CB
Spl. description:
fine to medium
reddish brown sand
w/ no gravel.

$2^{45}$ Sample 096-UIW-002-GW80
was secured
Spl. depth 76'-80'
Sampler: CB
Description: Slightly turbid.

$3^{05}$ Sample 096-UIW-002-GW70
Spl. depth 66'-70'
Sampler: CB
Description: Slightly turbid.

$3^{20}$ Sample 096-UIW-002-GW60
Spl. depth 56'-60'
Sampler: CB
Description - slightly turbid

End 3/29/07 ~~Cont.~~ KCE

$10^{15}$ Sample 096-GP-003-GW80 7/9/01
Spl. depth: 76'-80'
Sampler: CB
Desc slightly turbid due to silt content.

$10^{46}$ Sample 096-GP-003-GW70
Spl. depth: 66'-70'
Sampler: CB
Description: slight turbidity

$11^{00}$ Sample 096-GP-003-GW60
Spl. depth: 56'-60'
Sampler CB
Desc: slightly turbid

$12^{05}$ Sample 096-GP-004-GW80
Spl. depth 76'-80'
Sampler - CB
Desc. slightly turbid

$12^{20}$ Sample 096-GP-004-GW70
Spl depth: 66-70
Sampler: CB
Descr. Reddish brown - silt content turbidity

$12^{35}$ Sample 096-GP-004-GW60
Spl. depth: 56-60'
Sampler: CB
Desc. slightly turbid

$2^{30}$ Sample 096-GP-005-GW80
Spl. depth: 76'-80'
Sampler: CB
Desc. Slightly turbid

$2^{45}$ Sample 096-GP-005-GW70
Spl. depth: 66'-70'
Sampler: CB
Desc. slightly turbid

3[05] Sample 096-6P-005-GW60
Spl. depth 56'-60'
Sampler: CB
Desc. slightly turbid

7/10/01

8[00] Sample 096-6P-006-GW80
Spl. depth: 76'-80'
Sampler: CB
Desc turbid

8[10] Sample 096-6P-006-GW70
Spl Depth: 66'-70'
Sampler CB
Desc slightly turbid

8[20] Sample 096-6P-006-GW60
Spl depth 56'-60'
Sampler: CB
Desc slightly turbid

9:55 Sample 096-GP-007-GW80
Spl depth: 76'-80'
Sampler: CB
Description: turbid due to silt content

10:05 Sample 096-GP-007-GW70
Spl depth: 66'-70'
Sampler: CB
Desc: slightly turbid

10:15 Sample 096-GP-007-GW60
Spl depth: 56'-60'
Sampler: CB
Description: slightly turbid

11:30 Sample 096-GP-008-GW80
Spl. depth: 76'-80'
Sampler: CB
Description: slightly turbid

1147 Sample 096-GP-008-GW70
Sample depth: 66'-70'
Sampler: CB
Desc. slightly turbid

1158 Sample 096-GP-008-GW60
Sample depth: 56'-60'
Sampler: CB
Desc. turbid due to silt content.

110 Sample 096-GP-009-GW80
Spl. depth 76'-80'
Sampler: CB
Desc. turbid due to salt ~~content~~ content

125 Sample 096-GP-009-GW~~80~~ 70 KK
Spl. depth 66'-70'
Sampler: CB
Description: turbid due to silt content

Cont.

1<sup></sup>

135 Sample 096-6P-009-6W60
Sample Depth: 56'-60'
Sampler: CB
Des turbid

240 Sample 096-6P-010-6W80
Spl. depth 76'-80'
Sampler: CB
Desc turbid

255 Sample 096-6P-010-6W70
Spl. depth 66'-70'
Sampler: CB
Desc turbid

315 Sample 096-6P010-6W60
Spl depth 56'-60'
Sampler: CB
Desc turbid

End
7/10/01
KK

7/11/01

9^30 Sample 096-GP-011-GW80
Spl. depth: 76'-80'
Sampler: CB
Desc. turbid

9^45 Sample 096-GP-011-GW70
Spl. depth: 66'-70'
Sampler: CB
Desc. turbid

10^05 Sample 096-GP-011-GW60
Spl. depth: 56'-60'
Sampler: CB
Desc. turbid

11^45 Sample 096-GP-012-GW80
Spl. depth 76'-80'
Sampler: CB
Desc. turbid

Cont

$11^{55}$ Sample 096-GP-012-GW70
Spl depth 66'-70'
Sampler: CB
Desc. turbid

$12^{05}$ Sample 096-GP-012-GW60
Spl depth 56'-60'
Sampler: CB
Desc. turbid

$2^{05}$ Sample 096-GP-013-GW80
Spl depth 76'-80'
Sampler: CB
Desc turbid

$2^{20}$ Sample 096-GP-013-GW70
Spl. depth 66'-70'
Sampler: CB
Desc. turbid

$2^{30}$ Sample 096-GP-013-GW60
Spl. depth: 56'-60'
Sampler: CB
Desc. turbid

End 7/11/01
RF

7:45 Sample 096-GP-014-GW80
Spl. depth: 76'-80'
Sampler: CB
Des. turbid

7:55 Sample 096-GP-014-GW70
Spl. depth: 66'-70'
Sampler: CB
Desc. turbid

8:05 Sample 096-GP-014-GW60
Spl. depth: 56'-60'
Sampler: CB
Desc. turbid

9:00 Sample 096-GP-015-GW80
Spl. depth: 76'-80'
Sampler: CB
Desc. turbid

9:15 Sample 096-GP-015-GW70
Spl. depth: 66'-70'
Sampler: CB
Desc. turbid

$9^{25}$ Sample 096-GP-015-GW60
Spl. depth 56'-60'
Sampler: CB
Desc. turbid

$10^{30}$ Sample 096-GP-016-GW80
Spl depth 76'-80'
Sampler: CB
Desc turbid

Sample 096-GP-016-GW70
Spl. depth 66'-70'
Sampler: CB
Desc. turbid.

$10^{55}$ Sample 096-GP-016-GW60
Spl. depth: 56'-60'
Sampler: CB
Desc turbid

$12^{10}$ Sample 096-GP-017-GW80
Spl. depth: 76'-80'
Sampler: CB
Desc turbid

Cont.

12[25] Sample 096-GP-017-GW70
Spl. depth: 66'-70'
Sampler: CS
Desc. turbid

12[35] Sample 096-GP-017-GW60
Spl. depth: 56'-60'
Sampler: CS
Desc. turbid

End
7/12/07
KK

# APPENDIX C
## CHEMTECH LABORATORY SUMMARY REPORT

36 Sylvester Street Site
Site Code 1-30-043U
Westbury, New York

CHEMTECH 205 Campus Plaza 1 • Edison, NJ 08837 Phone: 732.225.4111 Fax: 732.225.4110

# DATA PACKAGE FOR RESULTS SUMMARY

## PROJECT NAME: 36 SYLVESTER STREET
## PROJECT # SITE CODE 1-30-043U

**IMPACT ENVIRONMENTAL**
**1 VILLAGE PLAZA**
**KINGS PARK, NY 11754**
**631-269-8800**



| | |
|---|---|
| CHEMTECH PROJECT | L3772ASP |
| ATTENTION | KEVIN KLEAKA |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-GW60

Lab Name: CHEMTECH    Contract: IMPACT ENV.

Project No.: L3772    Site: 36 SYLVES Location: LB13090    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O01

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: A9885.D

Level: (low/med) ______    Date Received: 3/31/01

% Moisture: not dec. 100    Date Analyzed: 4/9/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units:

| CAS No. | Compound | (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 7.7 | |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | .320 | E |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 520 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 2400 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 170 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.9 | |
| 127-18-4 | Tetrachloroethene | 15 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-GW60

Lab Name: CHEMTECH    Contract: IMPACT ENV.

Project No.: L3772    Site: 36 SYLVES Location: LB13090    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O01

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: A9885.D

Level: (low/med) ______    Date Received: 3/31/01

% Moisture: not dec. 100    Date Analyzed: 4/9/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 0.3 | U |
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-001-GW60

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No. L3772 Site: 36 SYLVE Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A9885.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/9/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-GW60D

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O01DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0034.D

Level: (low/med) ____ Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 25.0

Soil Extract Volume: ____ (uL) Soil Aliquot Volume: ____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 28 | UD |
| 75-01-4 | Vinyl Chloride | 26 | UD |
| 74-83-9 | Bromomethane | 15 | UD |
| 75-00-3 | Chloroethane | 19 | UD |
| 75-69-4 | Trichlorofluoromethane | 10 | UD |
| 75-35-4 | 1,1-Dichloroethene | 140 | D |
| 75-09-2 | Methylene Chloride | 8.8 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 11 | UD |
| 75-34-3 | 1,1-Dichloroethane | 480 | D |
| 67-66-3 | Chloroform | 6.4 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 2500 | E |
| 56-23-5 | Carbon Tetrachloride | 7.6 | UD |
| 71-43-2 | Benzene | 6.8 | UD |
| 107-06-2 | 1,2-Dichloroethane | 8 | UD |
| 79-01-6 | Trichloroethene | 120 | D |
| 78-87-5 | 1,2-Dichloropropane | 10 | UD |
| 75-27-4 | Bromodichloromethane | 7.1 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 28 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 5.8 | UD |
| 108-88-3 | Toluene | 6.4 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 7.5 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 8.5 | UD |
| 127-18-4 | Tetrachloroethene | 6.9 | UD |
| 124-48-1 | Dibromochloromethane | 7 | UD |
| 108-90-7 | Chlorobenzene | 6.2 | UD |
| 100-41-4 | Ethyl Benzene | 11 | UD |
| 95-47-6 | o-Xylene | 11 | UD |
| 136777-61-2 | m/p-Xylenes | 9.8 | UD |
| 75-25-2 | Bromoform | 8.7 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 6.4 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 9.7 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 7.6 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 5.5 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-GW60D

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: 001DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0034.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 25.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 6.9 | UD |
| 107-02-8 | Acrolein | 810 | UD |
| 107-13-1 | Acrylonitrile | 77 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-GW60D

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13049 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O01DL1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0035.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 250.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 280 | UD |
| 75-01-4 | Vinyl Chloride | 260 | UD |
| 74-83-9 | Bromomethane | 150 | UD |
| 75-00-3 | Chloroethane | 190 | UD |
| 75-69-4 | Trichlorofluoromethane | 100 | UD |
| 75-35-4 | 1,1-Dichloroethene | 100 | UD |
| 75-09-2 | Methylene Chloride | 88 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 110 | UD |
| 75-34-3 | 1,1-Dichloroethane | 56 | UD |
| 67-66-3 | Chloroform | 64 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 3100 | D |
| 56-23-5 | Carbon Tetrachloride | 76 | UD |
| 71-43-2 | Benzene | 68 | UD |
| 107-06-2 | 1,2-Dichloroethane | 80 | UD |
| 79-01-6 | Trichloroethene | 92 | UD |
| 78-87-5 | 1,2-Dichloropropane | 100 | UD |
| 75-27-4 | Bromodichloromethane | 71 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 280 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 58 | UD |
| 108-88-3 | Toluene | 64 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 75 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 85 | UD |
| 127-18-4 | Tetrachloroethene | 69 | UD |
| 124-48-1 | Dibromochloromethane | 70 | UD |
| 108-90-7 | Chlorobenzene | 62 | UD |
| 100-41-4 | Ethyl Benzene | 110 | UD |
| 95-47-6 | o-Xylene | 110 | UD |
| 136777-61-2 | m/p-Xylenes | 98 | UD |
| 75-25-2 | Bromoform | 87 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 64 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 97 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 76 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 55 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-GW60D

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13049 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O01DL1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0035.D

Level: (low/med) ____ Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 250.0

Soil Extract Volume: ____ (uL) Soil Aliquot Volume: ____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 69 | UD |
| 107-02-8 | Acrolein | 8100 | UD |
| 107-13-1 | Acrylonitrile | 770 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-GWFLD 3-

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0010.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/19/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.4 | U |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 0.3 | U |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 0.4 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-GWFLD 3-

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0010.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/19/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

| CAS No. | Compound | (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 0.3 | U |
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-UIW-001-GWFLD 3-

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No. L3772 Site: 36 SYLVE Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0010.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/19/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-SSC2∂

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: L3772    Site: 36 SYLVES Location: LB12982    Group: 5970-VOA

Matrix: (soil/water) SOIL    Lab Sample ID: O03

Sample wt/vol: 5.0 (g/mL) G    Lab File ID: E3822.D

Level: (low/med) LOW    Date Received: 3/31/01

% Moisture: not dec. 5    Date Analyzed: 4/10/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 5.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 26 | U |
| 74-87-3 | Chloromethane | 26 | U |
| 75-01-4 | Vinyl Chloride | 26 | U |
| 74-83-9 | Bromomethane | 26 | U |
| 75-00-3 | Chloroethane | 26 | U |
| 75-69-4 | Trichlorofluoromethane | 26 | U |
| 75-35-4 | 1,1-Dichloroethene | 26 | U |
| 67-64-1 | Acetone | 16 | JB |
| 75-15-0 | Carbon Disulfide | 26 | U |
| 75-09-2 | Methylene Chloride | 12 | J |
| 156-60-5 | trans-1,2-Dichloroethene | 26 | U |
| 108-05-4 | Vinyl Acetate | 130 | U |
| 75-34-3 | 1,1-Dichloroethane | 26 | U |
| 78-93-3 | 2-Butanone | 26 | U |
| 594-20-7 | 2,2-Dichloropropane | 26 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 26 | U |
| 74-97-5 | Bromochloromethane | 26 | U |
| 67-66-3 | Chloroform | 26 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 26 | U |
| 563-58-6 | 1,1-Dichloropropene | 26 | U |
| 56-23-5 | Carbon Tetrachloride | 26 | U |
| 71-43-2 | Benzene | 26 | U |
| 107-06-2 | 1,2-Dichloroethane | 26 | U |
| 79-01-6 | Trichloroethene | 26 | U |
| 78-87-5 | 1,2-Dichloropropane | 26 | U |
| 74-95-3 | Dibromomethane | 26 | U |
| 75-27-4 | Bromodichloromethane | 26 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 26 | U |
| 108-88-3 | Toluene | 26 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 26 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 26 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 26 | U |
| 142-28-9 | 1,3-Dichloropropane | 26 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-SSC2a

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3822.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 5 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 110-75-8 | 2-Chloroethyl vinyl ether | 26 | U |
| 591-78-6 | 2-Hexanone | 26 | U |
| 124-48-1 | Dibromochloromethane | 26 | U |
| 106-93-4 | 1,2-Dibromoethane | 26 | U |
| 127-18-4 | Tetrachloroethene | 19 | J |
| 108-90-7 | Chlorobenzene | 26 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 26 | U |
| 100-41-4 | Ethyl Benzene | 26 | U |
| 136777-61-2 | m/p-Xylenes | 26 | U |
| 95-47-6 | o-Xylene | 26 | U |
| 100-42-5 | Styrene | 26 | U |
| 75-25-2 | Bromoform | 26 | U |
| 98-82-8 | Isopropylbenzene | 26 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 26 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 26 | U |
| 108-86-1 | Bromobenzene | 26 | U |
| 103-65-1 | n-propylbenzene | 26 | U |
| 95-49-8 | 2-Chlorotoluene | 26 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 26 | U |
| 106-43-4 | 4-Chlorotoluene | 26 | U |
| 98-06-6 | tert-Butylbenzene | 26 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 26 | U |
| 135-98-8 | sec-Butylbenzene | 26 | U |
| 99-87-6 | p-Isopropyltoluene | 26 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 26 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 26 | U |
| 104-51-8 | n-Butylbenzene | 26 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 26 | U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 26 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 26 | U |
| 87-68-3 | Hexachlorobutadiene | 26 | U |
| 91-20-3 | Naphthalene | 26 | U |
| 1634-04-4 | Methyl tert-butyl Ether | 26 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.: 096-UIW-002-SSC2 2

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: L3772  Site: 36 SYLVES  Location: LB12982  Group: 5970-VOA

Matrix: (soil/water) SOIL  Lab Sample ID: O03

Sample wt/vol: 5.0 (g/mL) G  Lab File ID: E3822.D

Level: (low/med) LOW  Date Received: 3/31/01

% Moisture: not dec. 5  Date Analyzed: 4/10/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 5.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 87-61-6 | 1,2,3-Trichlorobenzene | 26 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-UIW-002-SSC22

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. L3772 Site: 36 SYLVE Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 003

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3822.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4.8 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Number TICs found: 11

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 30.62 | 47 | JB |
| 2. | Unknown | 31.48 | 290 | J |
| 3. | Unknown Alkane | 32.91 | 160 | J |
| 4. | Unknown Alkane | 33.53 | 180 | J |
| 5. | Unknown | 33.92 | 680 | J |
| 6. | Unknown | 34.27 | 210 | J |
| 7. | Unknown Alkane | 35.51 | 650 | J |
| 8. | Unknown | 35.70 | 1500 | J |
| 9. | Unknown | 37.10 | 1400 | J |
| 10. | Unknown | 37.64 | 290 | J |
| 11. 31081-18-2 | Nonane, 3-methyl-5-propyl- | 38.07 | 4600 | J |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-SSC22

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENT

Project No.: L3772    Site: 36 SYLVEST Location: LB13046    Group: 096-UIW-00

Matrix: (soil/water) SOIL    Lab Sample ID: O03

Sample wt/vol: 30.0 (g/mL) G    Lab File ID: BJ041220.D

Level: (low/med) LOW    Date Received: 3/31/01

% Moisture: 5    decanted: (Y/N): N    Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL)    Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL)    Dilution Factor: 1.0

GPC Cleanup: (Y/N) N    pH:

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 111-44-4 | bis(2-Chloroethyl)ether | 350 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 350 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 350 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 350 | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 350 | U |
| 621-64-7 | n-Nitroso-di-n-propylamine | 350 | U |
| 67-72-1 | Hexachloroethane | 350 | U |
| 98-95-3 | Nitrobenzene | 350 | U |
| 78-59-1 | Isophorone | 350 | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 350 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 350 | U |
| 91-20-3 | Naphthalene | 350 | U |
| 106-47-8 | 4-Chloroaniline | 350 | U |
| 87-68-3 | Hexachlorobutadiene | 350 | U |
| 91-57-6 | 2-Methylnaphthalene | 350 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 350 | U |
| 91-58-7 | 2-Chloronaphthalene | 350 | U |
| 88-74-4 | 2-Nitroaniline | 350 | U |
| 131-11-3 | Dimethylphthalate | 350 | U |
| 208-96-8 | Acenaphthylene | 350 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 350 | U |
| 99-09-2 | 3-Nitroaniline | 350 | U |
| 83-32-9 | Acenaphthene | 350 | U |
| 132-64-9 | Dibenzofuran | 350 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 350 | U |
| 84-66-2 | Diethylphthalate | 350 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 350 | U |
| 86-73-7 | Fluorene | 350 | U |
| 100-01-6 | 4-Nitroaniline | 350 | U |
| 86-30-6 | n-Nitrosodiphenylamine | 350 | U |
| 122-66-7 | Azobenzene | 350 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 350 | U |
| 118-74-1 | Hexachlorobenzene | 350 | U |

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-SSC22

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENT

Project No.: L3772 Site: 36 SYLVEST Location: LB13046 Group: 096-UIW-00

Matrix: (soil/water) SOIL Lab Sample ID: O03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BJ041220.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: 5 decanted: (Y/N): N Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 85-01-8 | Phenanthrene | 350 | U |
| 120-12-7 | Anthracene | 350 | U |
| 84-74-2 | Di-n-butylphthalate | 350 | U |
| 206-44-0 | Fluoranthene | 350 | U |
| 129-00-0 | Pyrene | 350 | U |
| 85-68-7 | Butylbenzylphthalate | 350 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 350 | U |
| 56-55-3 | Benzo(a)anthracene | 350 | U |
| 218-01-9 | Chrysene | 350 | U |
| 117-81-7 | Bis(2-Ethylhexyl)phthalate | 570 | |
| 117-84-0 | Di-n-octyl phthalate | 350 | U |
| 205-99-2 | Benzo(b)fluoranthene | 350 | U |
| 207-08-9 | Benzo(k)fluoranthene | 350 | U |
| 50-32-8 | Benzo(a)pyrene | 350 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 350 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 350 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 350 | U |

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-002-SSC22

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENT

Project No.: L3772 Site: 36 SYLVE Location: LB13046 Group: 096-UIW-0

Matrix: (soil/water) SOIL Lab Sample ID: O03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BJ041220.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: 5 decanted: (Y/N) N Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 20 Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 16747-30-1 | Hexane, 2,4,4-trimethyl- | 11.68 | 710 | J |
| 2. 17301-26-7 | Undecane, 2,9-dimethyl- | 11.81 | 560 | J |
| 3. 62016-37-9 | Octane, 2,4,6-trimethyl- | 12.20 | 3800 | J |
| 4. 17312-55-9 | Decane, 3,8-dimethyl- | 12.73 | 4100 | J |
| 5. 61141-80-8 | Cyclohexane, 1,2-diethyl-3-m | 12.83 | 1100 | J |
| 6. 65149-85-1 | Cyclohexane, 1,1'-[1,2-bis(1 | 12.90 | 1500 | J |
| 7. 17312-75-3 | Nonane, 5-methyl-5-propyl- | 13.04 | 3000 | J |
| 8. | Unknown | 13.26 | 800 | J |
| 9. 13475-82-6 | Heptane, 2,2,4,6,6-pentameth | 13.41 | 1900 | J |
| 10. | Unknown | 13.47 | 1200 | J |
| 11. 594-38-7 | Butane, 2-iodo-2-methyl- | 13.82 | 1100 | J |
| 12. 10276-21-8 | 7-Oxabicyclo[4.1.0]heptan-2- | 13.90 | 770 | J |
| 13. 17312-55-9 | Decane, 3,8-dimethyl- | 14.12 | 650 | J |
| 14. | Unknown | 14.23 | 720 | J |
| 15. 1460-02-2 | Benzene, 1,3,5-tri-tert-buty | 14.37 | 950 | J |
| 16. 6703-81-7 | Heneicosane, 11-cyclopentyl- | 14.90 | 760 | J |
| 17. 25154-52-3 | Phenol, nonyl- | 18.29 | 1100 | J |
| 18. 136-83-4 | 2-Nonylphenol | 18.52 | 790 | J |
| 19. | Unknown | 18.93 | 950 | J |
| 20. | Unknown | 19.03 | 560 | J |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

U.S. EPA - CLP
1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

096-UIW-002-SSC22

Lab Name: CHEMTECH EDISON

Contract: 68-W00-088

Lab Code: CHEMED Case No.: SAS No.: SDG No.: L3772

Matrix (soil/water): SOIL Lab Sample ID: L3772-03 S

Level (low/med): LOW Date Received: 03/31/01

% Solids: 95.2

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 683 | | | P |
| 7440-36-0 | Antimony | 0.62 | U | | P |
| 7440-38-2 | Arsenic | 0.57 | U | | P |
| 7440-39-3 | Barium | 17.5 | B | | P |
| 7440-41-7 | Beryllium | 0.16 | U | | P |
| 7440-43-9 | Cadmium | 0.11 | U | | P |
| 7440-70-2 | Calcium | 347 | B | | P |
| 7440-47-3 | Chromium | 2.4 | | | P |
| 7440-48-4 | Cobalt | 0.27 | B | | P |
| 7440-50-8 | Copper | 17.1 | | | P |
| 7439-89-6 | Iron | 2150 | | | P |
| 7439-92-1 | Lead | 7.9 | | | P |
| 7439-95-4 | Magnesium | 107 | B | | P |
| 7439-96-5 | Manganese | 4.4 | | | P |
| 7439-97-6 | Mercury | 0.04 | U | | CV |
| 7440-02-0 | Nickel | 0.88 | B | | P |
| 7440-09-7 | Potassium | 46.1 | B | | P |
| 7782-49-2 | Selenium | 0.34 | U | | P |
| 7440-22-4 | Silver | 0.21 | B | | P |
| 7440-23-5 | Sodium | 62.1 | B | | P |
| 7440-28-0 | Thallium | 0.55 | U | | P |
| 7440-62-2 | Vanadium | 2.0 | B | | P |
| 7440-66-6 | Zinc | 9.2 | | | P |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-SS24

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: L3772    Site: 36 SYLVES Location: LB12982    Group: 5970-VOA

Matrix: (soil/water) SOIL    Lab Sample ID: O04

Sample wt/vol: 5.0 (g/mL) G    Lab File ID: E3823.D

Level: (low/med) LOW    Date Received: 3/31/01

% Moisture: not dec. 3    Date Analyzed: 4/10/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | Concentration (ug/Kg) | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 5.2 | U |
| 74-87-3 | Chloromethane | 5.2 | U |
| 75-01-4 | Vinyl Chloride | 5.2 | U |
| 74-83-9 | Bromomethane | 5.2 | U |
| 75-00-3 | Chloroethane | 5.2 | U |
| 75-69-4 | Trichlorofluoromethane | 5.2 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.2 | U |
| 67-64-1 | Acetone | 5.2 | U |
| 75-15-0 | Carbon Disulfide | 5.2 | U |
| 75-09-2 | Methylene Chloride | 2.5 | J |
| 156-60-5 | trans-1,2-Dichloroethene | 5.2 | U |
| 108-05-4 | Vinyl Acetate | 26 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.2 | U |
| 78-93-3 | 2-Butanone | 5.2 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.2 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.2 | U |
| 74-97-5 | Bromochloromethane | 5.2 | U |
| 67-66-3 | Chloroform | 5.2 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.2 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.2 | U |
| 56-23-5 | Carbon Tetrachloride | 5.2 | U |
| 71-43-2 | Benzene | 5.2 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.2 | U |
| 79-01-6 | Trichloroethene | 5.2 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.2 | U |
| 74-95-3 | Dibromomethane | 5.2 | U |
| 75-27-4 | Bromodichloromethane | 5.2 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.2 | U |
| 108-88-3 | Toluene | 5.2 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 5.2 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.2 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.2 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-SS24

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 004

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3823.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 3 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 110-75-8 | 2-Chloroethyl vinyl ether | 5.2 | U |
| 591-78-6 | 2-Hexanone | 5.2 | U |
| 124-48-1 | Dibromochloromethane | 5.2 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.2 | U |
| 127-18-4 | Tetrachloroethene | 5.2 | U |
| 108-90-7 | Chlorobenzene | 5.2 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.2 | U |
| 100-41-4 | Ethyl Benzene | 5.2 | U |
| 136777-61-2 | m/p-Xylenes | 5.2 | U |
| 95-47-6 | o-Xylene | 5.2 | U |
| 100-42-5 | Styrene | 5.2 | U |
| 75-25-2 | Bromoform | 5.2 | U |
| 98-82-8 | Isopropylbenzene | 5.2 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.2 | U |
| 108-86-1 | Bromobenzene | 5.2 | U |
| 103-65-1 | n-propylbenzene | 5.2 | U |
| 95-49-8 | 2-Chlorotoluene | 5.2 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.2 | U |
| 106-43-4 | 4-Chlorotoluene | 5.2 | U |
| 98-06-6 | tert-Butylbenzene | 5.2 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.2 | U |
| 135-98-8 | sec-Butylbenzene | 5.2 | U |
| 99-87-6 | p-Isopropyltoluene | 5.2 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.2 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.2 | U |
| 104-51-8 | n-Butylbenzene | 5.2 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.2 | U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 5.2 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.2 | U |
| 87-68-3 | Hexachlorobutadiene | 5.2 | U |
| 91-20-3 | Naphthalene | 5.2 | U |
| 1634-04-4 | Methyl tert-butyl Ether | 5.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-SS24

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3823.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 3 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.2 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-002-SS24

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No. L3772    Site: 36 SYLVE    Location: LB12982    Group: 5970-VOA

Matrix: (soil/water) SOIL    Lab Sample ID: O04

Sample wt/vol: 5.0 (g/mL) G    Lab File ID: E3823.D

Level: (low/med) LOW    Date Received: 3/31/01

% Moisture: not dec. 3.3    Date Analyzed: 4/10/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Number TICs found: 2    Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Unknown | 35.68 | 17 | J |
| 2. 3891-98-3 | Dodecane, 2,6,10-trimethyl- | 38.05 | 21 | J |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-SS26

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL .

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 005

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3824.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 5.2 | U |
| 74-87-3 | Chloromethane | 5.2 | U |
| 75-01-4 | Vinyl Chloride | 5.2 | U |
| 74-83-9 | Bromomethane | 5.2 | U |
| 75-00-3 | Chloroethane | 5.2 | U |
| 75-69-4 | Trichlorofluoromethane | 5.2 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.2 | U |
| 67-64-1 | Acetone | 5.2 | U |
| 75-15-0 | Carbon Disulfide | 5.2 | U |
| 75-09-2 | Methylene Chloride | 2.5 | J |
| 156-60-5 | trans-1,2-Dichloroethene | 5.2 | U |
| 108-05-4 | Vinyl Acetate | 26 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.2 | U |
| 78-93-3 | 2-Butanone | 5.2 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.2 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.2 | U |
| 74-97-5 | Bromochloromethane | 5.2 | U |
| 67-66-3 | Chloroform | 5.2 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.2 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.2 | U |
| 56-23-5 | Carbon Tetrachloride | 5.2 | U |
| 71-43-2 | Benzene | 5.2 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.2 | U |
| 79-01-6 | Trichloroethene | 5.2 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.2 | U |
| 74-95-3 | Dibromomethane | 5.2 | U |
| 75-27-4 | Bromodichloromethane | 5.2 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.2 | U |
| 108-88-3 | Toluene | 5.2 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 5.2 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.2 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.2 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-SS26

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 005

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3824.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 110-75-8 | 2-Chloroethyl vinyl ether | 5.2 | U |
| 591-78-6 | 2-Hexanone | 5.2 | U |
| 124-48-1 | Dibromochloromethane | 5.2 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.2 | U |
| 127-18-4 | Tetrachloroethene | 5.2 | U |
| 108-90-7 | Chlorobenzene | 5.2 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.2 | U |
| 100-41-4 | Ethyl Benzene | 5.2 | U |
| 136777-61-2 | m/p-Xylenes | 5.2 | U |
| 95-47-6 | o-Xylene | 5.2 | U |
| 100-42-5 | Styrene | 5.2 | U |
| 75-25-2 | Bromoform | 5.2 | U |
| 98-82-8 | Isopropylbenzene | 5.2 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.2 | U |
| 108-86-1 | Bromobenzene | 5.2 | U |
| 103-65-1 | n-propylbenzene | 5.2 | U |
| 95-49-8 | 2-Chlorotoluene | 5.2 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.2 | U |
| 106-43-4 | 4-Chlorotoluene | 5.2 | U |
| 98-06-6 | tert-Butylbenzene | 5.2 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.2 | U |
| 135-98-8 | sec-Butylbenzene | 5.2 | U |
| 99-87-6 | p-Isopropyltoluene | 5.2 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.2 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.2 | U |
| 104-51-8 | n-Butylbenzene | 5.2 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.2 | U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 5.2 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.2 | U |
| 87-68-3 | Hexachlorobutadiene | 5.2 | U |
| 91-20-3 | Naphthalene | 5.2 | U |
| 1634-04-4 | Methyl tert-butyl Ether | 5.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-SS26

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3824.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.2 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-002-SS26

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. L3772 Site: 36 SYLVE Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 005

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3824.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 3.6 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:
Number TICs found: 0 (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-SS28

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 006

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3825.D

Level: (low/med). LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 5.2 | U |
| 74-87-3 | Chloromethane | 5.2 | U |
| 75-01-4 | Vinyl Chloride | 5.2 | U |
| 74-83-9 | Bromomethane | 5.2 | U |
| 75-00-3 | Chloroethane | 5.2 | U |
| 75-69-4 | Trichlorofluoromethane | 5.2 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.2 | U |
| 67-64-1 | Acetone | 5.2 | U |
| 75-15-0 | Carbon Disulfide | 5.2 | U |
| 75-09-2 | Methylene Chloride | 2.8 | J |
| 156-60-5 | trans-1,2-Dichloroethene | 5.2 | U |
| 108-05-4 | Vinyl Acetate | 26 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.2 | U |
| 78-93-3 | 2-Butanone | 5.2 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.2 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.2 | U |
| 74-97-5 | Bromochloromethane | 5.2 | U |
| 67-66-3 | Chloroform | 5.2 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.2 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.2 | U |
| 56-23-5 | Carbon Tetrachloride | 5.2 | U |
| 71-43-2 | Benzene | 5.2 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.2 | U |
| 79-01-6 | Trichloroethene | 5.2 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.2 | U |
| 74-95-3 | Dibromomethane | 5.2 | U |
| 75-27-4 | Bromodichloromethane | 5.2 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.2 | U |
| 108-88-3 | Toluene | 5.2 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 5.2 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.2 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.2 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-SS28

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3825.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 110-75-8 | 2-Chloroethyl vinyl ether | 5.2 | U |
| 591-78-6 | 2-Hexanone | 5.2 | U |
| 124-48-1 | Dibromochloromethane | 5.2 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.2 | U |
| 127-18-4 | Tetrachloroethene | 5.2 | U |
| 108-90-7 | Chlorobenzene | 5.2 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.2 | U |
| 100-41-4 | Ethyl Benzene | 5.2 | U |
| 136777-61-2 | m/p-Xylenes | 5.2 | U |
| 95-47-6 | o-Xylene | 5.2 | U |
| 100-42-5 | Styrene | 5.2 | U |
| 75-25-2 | Bromoform | 5.2 | U |
| 98-82-8 | Isopropylbenzene | 5.2 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.2 | U |
| 108-86-1 | Bromobenzene | 5.2 | U |
| 103-65-1 | n-propylbenzene | 5.2 | U |
| 95-49-8 | 2-Chlorotoluene | 5.2 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.2 | U |
| 106-43-4 | 4-Chlorotoluene | 5.2 | U |
| 98-06-6 | tert-Butylbenzene | 5.2 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.2 | U |
| 135-98-8 | sec-Butylbenzene | 5.2 | U |
| 99-87-6 | p-Isopropyltoluene | 5.2 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.2 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.2 | U |
| 104-51-8 | n-Butylbenzene | 5.2 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.2 | U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 5.2 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.2 | U |
| 87-68-3 | Hexachlorobutadiene | 5.2 | U |
| 91-20-3 | Naphthalene | 5.2 | U |
| 1634-04-4 | Methyl tert-butyl Ether | 5.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-SS28

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3825.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.2 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-002-SS28

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. L3772 Site: 36 SYLVE Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3825.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 3.8 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units:
Number TICs found: 1 (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 4.65 | 5.7 | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-SS32

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 007

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3834.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 5.2 | U |
| 74-87-3 | Chloromethane | 5.2 | U |
| 75-01-4 | Vinyl Chloride | 5.2 | U |
| 74-83-9 | Bromomethane | 5.2 | U |
| 75-00-3 | Chloroethane | 5.2 | U |
| 75-69-4 | Trichlorofluoromethane | 5.2 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.2 | U |
| 67-64-1 | Acetone | 6 | B |
| 75-15-0 | Carbon Disulfide | 5.2 | U |
| 75-09-2 | Methylene Chloride | 5.2 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 5.2 | U |
| 108-05-4 | Vinyl Acetate | 26 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.2 | U |
| 78-93-3 | 2-Butanone | 5.2 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.2 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.2 | U |
| 74-97-5 | Bromochloromethane | 5.2 | U |
| 67-66-3 | Chloroform | 5.2 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.2 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.2 | U |
| 56-23-5 | Carbon Tetrachloride | 5.2 | U |
| 71-43-2 | Benzene | 5.2 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.2 | U |
| 79-01-6 | Trichloroethene | 5.2 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.2 | U |
| 74-95-3 | Dibromomethane | 5.2 | U |
| 75-27-4 | Bromodichloromethane | 5.2 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.2 | U |
| 108-88-3 | Toluene | 5.2 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 5.2 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.2 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.2 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-SS32

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 007

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3834.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 110-75-8 | 2-Chloroethyl vinyl ether | 5.2 | U |
| 591-78-6 | 2-Hexanone | 5.2 | U |
| 124-48-1 | Dibromochloromethane | 5.2 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.2 | U |
| 127-18-4 | Tetrachloroethene | 5.2 | U |
| 108-90-7 | Chlorobenzene | 5.2 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.2 | U |
| 100-41-4 | Ethyl Benzene | 5.2 | U |
| 136777-61-2 | m/p-Xylenes | 5.2 | U |
| 95-47-6 | o-Xylene | 5.2 | U |
| 100-42-5 | Styrene | 5.2 | U |
| 75-25-2 | Bromoform | 5.2 | U |
| 98-82-8 | Isopropylbenzene | 5.2 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.2 | U |
| 108-86-1 | Bromobenzene | 5.2 | U |
| 103-65-1 | n-propylbenzene | 5.2 | U |
| 95-49-8 | 2-Chlorotoluene | 5.2 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.2 | U |
| 106-43-4 | 4-Chlorotoluene | 5.2 | U |
| 98-06-6 | tert-Butylbenzene | 5.2 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.2 | U |
| 135-98-8 | sec-Butylbenzene | 5.2 | U |
| 99-87-6 | p-Isopropyltoluene | 5.2 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.2 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.2 | U |
| 104-51-8 | n-Butylbenzene | 5.2 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.2 | U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 5.2 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.2 | U |
| 87-68-3 | Hexachlorobutadiene | 5.2 | U |
| 91-20-3 | Naphthalene | 5.2 | U |
| 1634-04-4 | Methyl tert-butyl Ether | 5.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-SS32

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3834.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.2 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-002-SS32

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No. L3772    Site: 36 SYLVE    Location: LB12982    Group: 5970-VOA

Matrix: (soil/water) SOIL    Lab Sample ID: O07

Sample wt/vol: 5.0 (g/mL) G    Lab File ID: E3834.D

Level: (low/med) LOW    Date Received: 3/31/01

% Moisture: not dec. 4.4    Date Analyzed: 4/11/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)    Soil Aliquot Volume: ____ (uL)

Concentration Units:

Number TICs found: 0    (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UTW-002-SS43

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: L3772  Site: 36 SYLVES Location: LB12982  Group: 5970-VOA

Matrix: (soil/water) SOIL  Lab Sample ID: O08

Sample wt/vol: 5.0 (g/mL) G  Lab File ID: E3830.D

Level: (low/med) LOW  Date Received: 3/31/01

% Moisture: not dec. 4  Date Analyzed: 4/11/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 5.2 | U |
| 74-87-3 | Chloromethane | 5.2 | U |
| 75-01-4 | Vinyl Chloride | 5.2 | U |
| 74-83-9 | Bromomethane | 5.2 | U |
| 75-00-3 | Chloroethane | 5.2 | U |
| 75-69-4 | Trichlorofluoromethane | 5.2 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.2 | U |
| 67-64-1 | Acetone | 7.7 | B |
| 75-15-0 | Carbon Disulfide | 5.2 | U |
| 75-09-2 | Methylene Chloride | 3 | J |
| 156-60-5 | trans-1,2-Dichloroethene | 5.2 | U |
| 108-05-4 | Vinyl Acetate | 26 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.2 | U |
| 78-93-3 | 2-Butanone | 5.2 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.2 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.2 | U |
| 74-97-5 | Bromochloromethane | 5.2 | U |
| 67-66-3 | Chloroform | 5.2 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.2 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.2 | U |
| 56-23-5 | Carbon Tetrachloride | 5.2 | U |
| 71-43-2 | Benzene | 5.2 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.2 | U |
| 79-01-6 | Trichloroethene | 5.2 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.2 | U |
| 74-95-3 | Dibromomethane | 5.2 | U |
| 75-27-4 | Bromodichloromethane | 5.2 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.2 | U |
| 108-88-3 | Toluene | 5.2 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 5.2 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.2 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.2 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-SS43

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: L3772  Site: 36 SYLVES Location: LB12982  Group: 5970-VOA

Matrix: (soil/water) SOIL  Lab Sample ID: O08

Sample wt/vol: 5.0 (g/mL) G  Lab File ID: E3830.D

Level: (low/med) LOW  Date Received: 3/31/01

% Moisture: not dec. 4  Date Analyzed: 4/11/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 110-75-8 | 2-Chloroethyl vinyl ether | 5.2 | U |
| 591-78-6 | 2-Hexanone | 5.2 | U |
| 124-48-1 | Dibromochloromethane | 5.2 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.2 | U |
| 127-18-4 | Tetrachloroethene | 4.5 | J |
| 108-90-7 | Chlorobenzene | 5.2 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.2 | U |
| 100-41-4 | Ethyl Benzene | 5.2 | U |
| 136777-61-2 | m/p-Xylenes | 5.2 | U |
| 95-47-6 | o-Xylene | 5.2 | U |
| 100-42-5 | Styrene | 5.2 | U |
| 75-25-2 | Bromoform | 5.2 | U |
| 98-82-8 | Isopropylbenzene | 5.2 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.2 | U |
| 108-86-1 | Bromobenzene | 5.2 | U |
| 103-65-1 | n-propylbenzene | 5.2 | U |
| 95-49-8 | 2-Chlorotoluene | 5.2 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.2 | U |
| 106-43-4 | 4-Chlorotoluene | 5.2 | U |
| 98-06-6 | tert-Butylbenzene | 5.2 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.2 | U |
| 135-98-8 | sec-Butylbenzene | 5.2 | U |
| 99-87-6 | p-Isopropyltoluene | 5.2 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.2 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.2 | U |
| 104-51-8 | n-Butylbenzene | 5.2 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.2 | U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 5.2 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.2 | U |
| 87-68-3 | Hexachlorobutadiene | 5.2 | U |
| 91-20-3 | Naphthalene | 5.2 | U |
| 1634-04-4 | Methyl tert-butyl Ether | 5.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-SS43

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: L3772    Site: 36 SYLVES Location: LB12982    Group: 5970-VOA

Matrix: (soil/water) SOIL    Lab Sample ID: O08

Sample wt/vol: 5.0 (g/mL) G    Lab File ID: E3830.D

Level: (low/med) LOW    Date Received: 3/31/01

% Moisture: not dec. 4    Date Analyzed: 4/11/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.2 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-002-SS43

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. L3772 Site: 36 SYLVE Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3830.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 3.7 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units:
Number TICs found: 0 (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SSC18

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3835.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 26 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 34 | U |
| 74-87-3 | Chloromethane | 34 | U |
| 75-01-4 | Vinyl Chloride | 34 | U |
| 74-83-9 | Bromomethane | 34 | U |
| 75-00-3 | Chloroethane | 34 | U |
| 75-69-4 | Trichlorofluoromethane | 34 | U |
| 75-35-4 | 1,1-Dichloroethene | 34 | U |
| 67-64-1 | Acetone | 34 | U |
| 75-15-0 | Carbon Disulfide | 34 | U |
| 75-09-2 | Methylene Chloride | 34 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 34 | U |
| 108-05-4 | Vinyl Acetate | 170 | U |
| 75-34-3 | 1,1-Dichloroethane | 34 | U |
| 78-93-3 | 2-Butanone | 34 | U |
| 594-20-7 | 2,2-Dichloropropane | 34 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 34 | U |
| 74-97-5 | Bromochloromethane | 34 | U |
| 67-66-3 | Chloroform | 34 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 34 | U |
| 563-58-6 | 1,1-Dichloropropene | 34 | U |
| 56-23-5 | Carbon Tetrachloride | 34 | U |
| 71-43-2 | Benzene | 34 | U |
| 107-06-2 | 1,2-Dichloroethane | 34 | U |
| 79-01-6 | Trichloroethene | 34 | U |
| 78-87-5 | 1,2-Dichloropropane | 34 | U |
| 74-95-3 | Dibromomethane | 34 | U |
| 75-27-4 | Bromodichloromethane | 34 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 34 | U |
| 108-88-3 | Toluene | 34 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 34 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 34 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 34 | U |
| 142-28-9 | 1,3-Dichloropropane | 34 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SSC18

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3835.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 26 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 110-75-8 | 2-Chloroethyl vinyl ether | 34 | U |
| 591-78-6 | 2-Hexanone | 34 | U |
| 124-48-1 | Dibromochloromethane | 34 | U |
| 106-93-4 | 1,2-Dibromoethane | 34 | U |
| 127-18-4 | Tetrachloroethene | 55 | |
| 108-90-7 | Chlorobenzene | 34 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 34 | U |
| 100-41-4 | Ethyl Benzene | 34 | U |
| 136777-61-2 | m/p-Xylenes | 34 | U |
| 95-47-6 | o-Xylene | 34 | U |
| 100-42-5 | Styrene | 34 | U |
| 75-25-2 | Bromoform | 34 | U |
| 98-82-8 | Isopropylbenzene | 34 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 34 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 34 | U |
| 108-86-1 | Bromobenzene | 34 | U |
| 103-65-1 | n-propylbenzene | 34 | U |
| 95-49-8 | 2-Chlorotoluene | 34 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 93 | |
| 106-43-4 | 4-Chlorotoluene | 34 | U |
| 98-06-6 | tert-Butylbenzene | 34 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 140 | |
| 135-98-8 | sec-Butylbenzene | 34 | U |
| 99-87-6 | p-Isopropyltoluene | 34 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 34 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 900 | |
| 104-51-8 | n-Butylbenzene | 34 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 34 | U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 34 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 34 | U |
| 87-68-3 | Hexachlorobutadiene | 34 | U |
| 91-20-3 | Naphthalene | 34 | U |
| 1634-04-4 | Methyl tert-butyl Ether | 34 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-SSC1S

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3835.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 26 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 87-61-6 | 1,2,3-Trichlorobenzene | 34 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-001-SSC18

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. L3772 Site: 36 SYLVE Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3835.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 26.3 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units:
Number TICs found: 15 (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Unknown | 24.03 | 240 | J |
| 2. | Unknown | 24.34 | 120 | J |
| 3. 62108-26-3 | Decane, 2,6,8-trimethyl- | 25.04 | 190 | J |
| 4. | Unknown | 26.24 | 190 | J |
| 5. | Unknown Alkane | 27.05 | 460 | J |
| 6. | Unknown | 27.67 | 340 | J |
| 7. | Unknown | 28.29 | 480 | J |
| 8. | Unknown | 28.88 | 250 | J |
| 9. | Unknown Alkane | 29.34 | 160 | J |
| 10. | Unknown | 30.16 | 120 | J |
| 11. 31295-56-4 | Dodecane, 2,6,11-trimethyl- | 31.48 | 690 | J |
| 12. 17312-55-9 | Decane, 3,8-dimethyl- | 34.78 | 340 | J |
| 13. | Unknown Alkane | 35.44 | 270 | J |
| 14. | Unknown | 37.10 | 140 | J |
| 15. 31081-18-2 | Nonane, 3-methyl-5-propyl- | 38.03 | 370 | J |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-UIW-001-SSC18**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENT

Project No.: L3772 Site: 36 SYLVEST Location: LB13046 Group: 096-UIW-00

Matrix: (soil/water) SOIL Lab Sample ID: O09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BJ041221.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: 26 decanted: (Y/N): N Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ______

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 111-44-4 | bis(2-Chloroethyl)ether | 450 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 450 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 450 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 300 | J |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 450 | U |
| 621-64-7 | n-Nitroso-di-n-propylamine | 450 | U |
| 67-72-1 | Hexachloroethane | 450 | U |
| 98-95-3 | Nitrobenzene | 450 | U |
| 78-59-1 | Isophorone | 450 | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 450 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 450 | U |
| 91-20-3 | Naphthalene | 450 | U |
| 106-47-8 | 4-Chloroaniline | 140 | J |
| 87-68-3 | Hexachlorobutadiene | 450 | U |
| 91-57-6 | 2-Methylnaphthalene | 450 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 450 | U |
| 91-58-7 | 2-Chloronaphthalene | 450 | U |
| 88-74-4 | 2-Nitroaniline | 450 | U |
| 131-11-3 | Dimethylphthalate | 450 | U |
| 208-96-8 | Acenaphthylene | 450 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 450 | U |
| 99-09-2 | 3-Nitroaniline | 450 | U |
| 83-32-9 | Acenaphthene | 450 | U |
| 132-64-9 | Dibenzofuran | 450 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 450 | U |
| 84-66-2 | Diethylphthalate | 450 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 450 | U |
| 86-73-7 | Fluorene | 51 | J |
| 100-01-6 | 4-Nitroaniline | 450 | U |
| 86-30-6 | n-Nitrosodiphenylamine | 450 | U |
| 122-66-7 | Azobenzene | 450 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 450 | U |
| 118-74-1 | Hexachlorobenzene | 450 | U |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SSC18

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENT

Project No.: L3772 Site: 36 SYLVEST Location: LB13046 Group: 096-UIW-00

Matrix: (soil/water) SOIL Lab Sample ID: O09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BJ041221.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: 26 decanted: (Y/N): N Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 85-01-8 | Phenanthrene | 310 | J |
| 120-12-7 | Anthracene | 69 | J |
| 84-74-2 | Di-n-butylphthalate | 450 | U |
| 206-44-0 | Fluoranthene | 250 | J |
| 129-00-0 | Pyrene | 290 | J |
| 85-68-7 | Butylbenzylphthalate | 450 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 450 | U |
| 56-55-3 | Benzo(a)anthracene | 450 | U |
| 218-01-9 | Chrysene | 450 | U |
| 117-81-7 | Bis(2-Ethylhexyl)phthalate | 310 | J |
| 117-84-0 | Di-n-octyl phthalate | 450 | U |
| 205-99-2 | Benzo(b)fluoranthene | 450 | U |
| 207-08-9 | Benzo(k)fluoranthene | 450 | U |
| 50-32-8 | Benzo(a)pyrene | 450 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 450 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 450 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 450 | U |

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-001-SSC18

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENT

Project No.: L3772 Site: 36 SYLVE Location: LB13046 Group: 096-UIW-0

Matrix: (soil/water) SOIL Lab Sample ID: O09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BJ041221.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: 26 decanted: (Y/N) N Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 20 Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 1071-26-7 | Heptane, 2,2-dimethyl- | 8.02 | 540 | J |
| 2. 629-94-7 | Heneicosane | 10.05 | 520 | J |
| 3. 62238-01-1 | Decane, 2,2,8-trimethyl- | 10.17 | 860 | J |
| 4. 7154-80-5 | Heptane, 3,3,5-trimethyl- | 12.00 | 690 | J |
| 5. 62338-16-3 | Decane, 3,3,8-trimethyl- | 12.12 | 690 | J |
| 6. 594-38-7 | Butane, 2-iodo-2-methyl- | 12.68 | 1200 | J |
| 7. 31081-17-1 | Nonane, 2-methyl-5-propyl- | 12.98 | 2300 | J |
| 8. 17301-31-4 | Undecane, 3,9-dimethyl- | 13.13 | 1000 | J |
| 9. 1071-31-4 | 2,2,7,7-Tetramethyloctane | 13.35 | 1400 | J |
| 10. | Unknown | 13.42 | 760 | J |
| 11. 629-50-5 | Tridecane | 13.76 | 720 | J |
| 12. | Unknown | 13.83 | 550 | J |
| 13. 638-36-8 | Hexadecane, 2,6,10,14-tetram | 14.07 | 620 | J |
| 14. 25154-52-3 | Phenol, nonyl- | 18.26 | 890 | J |
| 15. 36728-72-0 | 28-Nor-17.beta.(H)-hopane | 31.78 | 900 | J |
| 16. 80-97-7 | Cholestanol | 31.96 | 6100 | J |
| 17. | Coprostan-3-one | 32.28 | 2800 | J |
| 18. | Unknown | 32.47 | 770 | J |
| 19. 2089-02-3 | Cholestane, 3-ethoxy-, (3.be | 33.72 | 880 | J |
| 20. | Unknown | 34.15 | 680 | J |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SSC18RE

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENT

Project No.: L3772  Site: 36 SYLVEST  Location: LB13046  Group: 096-UIW-00

Matrix: (soil/water) SOIL  Lab Sample ID: O09RE

Sample wt/vol: 30.0 (g/mL) G  Lab File ID: BJ041227.D

Level: (low/med) LOW  Date Received: 3/31/01

% Moisture: 26  decanted: (Y/N): N  Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL)  Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL)  Dilution Factor: 1.0

GPC Cleanup: (Y/N) N  pH: 

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 111-44-4 | bis(2-Chloroethyl)ether | 450 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 450 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 450 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 290 | J |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 450 | U |
| 621-64-7 | n-Nitroso-di-n-propylamine | 450 | U |
| 67-72-1 | Hexachloroethane | 450 | U |
| 98-95-3 | Nitrobenzene | 450 | U |
| 78-59-1 | Isophorone | 450 | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 450 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 450 | U |
| 91-20-3 | Naphthalene | 450 | U |
| 106-47-8 | 4-Chloroaniline | 200 | J |
| 87-68-3 | Hexachlorobutadiene | 450 | U |
| 91-57-6 | 2-Methylnaphthalene | 450 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 450 | U |
| 91-58-7 | 2-Chloronaphthalene | 450 | U |
| 88-74-4 | 2-Nitroaniline | 450 | U |
| 131-11-3 | Dimethylphthalate | 450 | U |
| 208-96-8 | Acenaphthylene | 450 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 450 | U |
| 99-09-2 | 3-Nitroaniline | 450 | U |
| 83-32-9 | Acenaphthene | 450 | U |
| 132-64-9 | Dibenzofuran | 450 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 450 | U |
| 84-66-2 | Diethylphthalate | 450 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 450 | U |
| 86-73-7 | Fluorene | 52 | J |
| 100-01-6 | 4-Nitroaniline | 450 | U |
| 86-30-6 | n-Nitrosodiphenylamine | 450 | U |
| 122-66-7 | Azobenzene | 450 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 450 | U |
| 118-74-1 | Hexachlorobenzene | 450 | U |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SSC18RE

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENT

Project No.: L3772    Site: 36 SYLVEST    Location: LB13046    Group: 096-UIW-00

Matrix: (soil/water) SOIL    Lab Sample ID: O09RE

Sample wt/vol: 30.0 (g/mL) G    Lab File ID: BJ041227.D

Level: (low/med) LOW    Date Received: 3/31/01

% Moisture: 26    decanted: (Y/N): N    Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL)    Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL)    Dilution Factor: 1.0

GPC Cleanup: (Y/N) N    pH: ______

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 85-01-8 | Phenanthrene | 300 | J |
| 120-12-7 | Anthracene | 67 | J |
| 84-74-2 | Di-n-butylphthalate | 450 | U |
| 206-44-0 | Fluoranthene | 250 | J |
| 129-00-0 | Pyrene | 280 | J |
| 85-68-7 | Butylbenzylphthalate | 450 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 450 | U |
| 56-55-3 | Benzo(a)anthracene | 450 | U |
| 218-01-9 | Chrysene | 450 | U |
| 117-81-7 | Bis(2-Ethylhexyl)phthalate | 340 | J |
| 117-84-0 | Di-n-octyl phthalate | 450 | U |
| 205-99-2 | Benzo(b)fluoranthene | 83 | J |
| 207-08-9 | Benzo(k)fluoranthene | 140 | J |
| 50-32-8 | Benzo(a)pyrene | 72 | J |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 450 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 450 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 450 | U |

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-001-SSC18F

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENT

Project No.: L3772 Site: 36 SYLVE Location: LB13046 Group: 096-UIW-0

Matrix: (soil/water) SOIL Lab Sample ID: O09RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BJ041227.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: 26 decanted: (Y/N) N Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 

Number TICs found: 20 Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 62108-25-2 | Decane, 2,6,7-trimethyl- | 8.03 | 540 | J |
| 2. 62237-96-1 | Decane, 2,2,5-trimethyl- | 10.17 | 840 | J |
| 3. 17301-28-9 | Undecane, 3,6-dimethyl- | 12.00 | 680 | J |
| 4. 62338-16-3 | Decane, 3,3,8-trimethyl- | 12.12 | 650 | J |
| 5. 594-38-7 | Butane, 2-iodo-2-methyl- | 12.69 | 1100 | J |
| 6. 1921-70-6 | Pentadecane, 2,6,10,14-tetra | 13.00 | 2400 | J |
| 7. 17312-57-1 | Dodecane, 3-methyl- | 13.13 | 1000 | J |
| 8. 62237-97-2 | Decane, 2,2,6-trimethyl- | 13.35 | 1400 | J |
| 9. 13475-82-6 | Heptane, 2,2,4,6,6-pentameth | 13.43 | 760 | J |
| 10. 18344-37-1 | Heptadecane, 2,6,10,14-tetra | 13.76 | 720 | J |
| 11. 7098-21-7 | Tritetracontane | 13.84 | 540 | J |
| 12. | Unknown | 14.07 | 620 | J |
| 13. 629-78-7 | Heptadecane | 18.26 | 860 | J |
| 14. 25154-52-3 | Phenol, nonyl- | 18.51 | 510 | J |
| 15. | Unknown | 31.76 | 900 | J |
| 16. 80-97-7 | Cholestanol | 31.96 | 7700 | J |
| 17. | Unknown | 32.28 | 3000 | J |
| 18. | Unknown | 32.48 | 710 | J |
| 19. 2089-02-3 | Cholestane, 3-ethoxy-, (3.be | 33.72 | 830 | J |
| 20. | Unknown | 34.18 | 700 | J |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

U.S. EPA - CLP
1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

096-UIW-001-SSC18

Lab Name: CHEMTECH EDISON

Contract: 68-W00-088

Lab Code: CHEMED Case No.: SAS No.: SDG No.: L3772

Matrix (soil/water): SOIL Lab Sample ID: L3772-09 S

Level (low/med): LOW Date Received: 03/31/01

% Solids: 73.7

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 2870 | | | P |
| 7440-36-0 | Antimony | 1.9 | B | | P |
| 7440-38-2 | Arsenic | 1.5 | | | P |
| 7440-39-3 | Barium | 46.4 | | | P |
| 7440-41-7 | Beryllium | 0.22 | B | | P |
| 7440-43-9 | Cadmium | 6.8 | | | P |
| 7440-70-2 | Calcium | 2090 | | | P |
| 7440-47-3 | Chromium | 81.3 | | | P |
| 7440-48-4 | Cobalt | 1.9 | B | | P |
| 7440-50-8 | Copper | 961 | | | P |
| 7439-89-6 | Iron | 3410 | | | P |
| 7439-92-1 | Lead | 255 | | | P |
| 7439-95-4 | Magnesium | 967 | | | P |
| 7439-96-5 | Manganese | 113 | | | P |
| 7439-97-6 | Mercury | 1.75 | | | CV |
| 7440-02-0 | Nickel | 10.3 | | | P |
| 7440-09-7 | Potassium | 126 | B | | P |
| 7782-49-2 | Selenium | 0.84 | | | P |
| 7440-22-4 | Silver | 7.3 | | | P |
| 7440-23-5 | Sodium | 148 | B | | P |
| 7440-28-0 | Thallium | 0.71 | U | | P |
| 7440-62-2 | Vanadium | 6.2 | B | | P |
| 7440-66-6 | Zinc | 331 | | | P |

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-SS20

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3831.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 14 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 5.8 | U |
| 74-87-3 | Chloromethane | 5.8 | U |
| 75-01-4 | Vinyl Chloride | 5.8 | U |
| 74-83-9 | Bromomethane | 5.8 | U |
| 75-00-3 | Chloroethane | 5.8 | U |
| 75-69-4 | Trichlorofluoromethane | 5.8 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.8 | U |
| 67-64-1 | Acetone | 8.5 | B |
| 75-15-0 | Carbon Disulfide | 5.8 | U |
| 75-09-2 | Methylene Chloride | 3.9 | J |
| 156-60-5 | trans-1,2-Dichloroethene | 5.8 | U |
| 108-05-4 | Vinyl Acetate | 29 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.8 | U |
| 78-93-3 | 2-Butanone | 5.8 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.8 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.8 | U |
| 74-97-5 | Bromochloromethane | 5.8 | U |
| 67-66-3 | Chloroform | 5.8 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.8 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.8 | U |
| 56-23-5 | Carbon Tetrachloride | 5.8 | U |
| 71-43-2 | Benzene | 5.8 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.8 | U |
| 79-01-6 | Trichloroethene | 5.8 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.8 | U |
| 74-95-3 | Dibromomethane | 5.8 | U |
| 75-27-4 | Bromodichloromethane | 5.8 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.8 | U |
| 108-88-3 | Toluene | 5.8 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 5.8 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.8 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.8 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.8 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SS20

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: L3772    Site: 36 SYLVES Location: LB12982    Group: 5970-VOA

Matrix: (soil/water) SOIL    Lab Sample ID: O10

Sample wt/vol: 5.0 (g/mL) G    Lab File ID: E3831.D

Level: (low/med) LOW    Date Received: 3/31/01

% Moisture: not dec. 14    Date Analyzed: 4/11/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 110-75-8 | 2-Chloroethyl vinyl ether | 5.8 | U |
| 591-78-6 | 2-Hexanone | 5.8 | U |
| 124-48-1 | Dibromochloromethane | 5.8 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.8 | U |
| 127-18-4 | Tetrachloroethene | 5.8 | U |
| 108-90-7 | Chlorobenzene | 5.8 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.8 | U |
| 100-41-4 | Ethyl Benzene | 5.8 | U |
| 136777-61-2 | m/p-Xylenes | 5.8 | U |
| 95-47-6 | o-Xylene | 5.8 | U |
| 100-42-5 | Styrene | 5.8 | U |
| 75-25-2 | Bromoform | 5.8 | U |
| 98-82-8 | Isopropylbenzene | 5.8 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.8 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.8 | U |
| 108-86-1 | Bromobenzene | 5.8 | U |
| 103-65-1 | n-propylbenzene | 5.8 | U |
| 95-49-8 | 2-Chlorotoluene | 5.8 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.8 | U |
| 106-43-4 | 4-Chlorotoluene | 5.8 | U |
| 98-06-6 | tert-Butylbenzene | 5.8 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.8 | U |
| 135-98-8 | sec-Butylbenzene | 5.8 | U |
| 99-87-6 | p-Isopropyltoluene | 5.8 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.8 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.8 | U |
| 104-51-8 | n-Butylbenzene | 5.8 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.8 | U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 5.8 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.8 | U |
| 87-68-3 | Hexachlorobutadiene | 5.8 | U |
| 91-20-3 | Naphthalene | 5.8 | U |
| 1634-04-4 | Methyl tert-butyl Ether | 5.8 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SS20

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3831.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 14 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | Concentration (ug/Kg) | Q |
|---|---|---|---|
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.8 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-UIW-001-SS20

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. L3772 Site: 36 SYLVE Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3831.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 14 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-SS22

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3832.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 5 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 5.3 | U |
| 74-87-3 | Chloromethane | 5.3 | U |
| 75-01-4 | Vinyl Chloride | 5.3 | U |
| 74-83-9 | Bromomethane | 5.3 | U |
| 75-00-3 | Chloroethane | 5.3 | U |
| 75-69-4 | Trichlorofluoromethane | 5.3 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.3 | U |
| 67-64-1 | Acetone | 6.1 | B |
| 75-15-0 | Carbon Disulfide | 5.3 | U |
| 75-09-2 | Methylene Chloride | 5.3 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 5.3 | U |
| 108-05-4 | Vinyl Acetate | 26 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.3 | U |
| 78-93-3 | 2-Butanone | 5.3 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.3 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.3 | U |
| 74-97-5 | Bromochloromethane | 5.3 | U |
| 67-66-3 | Chloroform | 5.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.3 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.3 | U |
| 56-23-5 | Carbon Tetrachloride | 5.3 | U |
| 71-43-2 | Benzene | 5.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.3 | U |
| 79-01-6 | Trichloroethene | 5.3 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.3 | U |
| 74-95-3 | Dibromomethane | 5.3 | U |
| 75-27-4 | Bromodichloromethane | 5.3 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.3 | U |
| 108-88-3 | Toluene | 5.3 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 5.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.3 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.3 | U |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-SS22

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3832.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 5 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | | Q |
|---|---|---|---|
| 110-75-8 | 2-Chloroethyl vinyl ether | 5.3 | U |
| 591-78-6 | 2-Hexanone | 5.3 | U |
| 124-48-1 | Dibromochloromethane | 5.3 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.3 | U |
| 127-18-4 | Tetrachloroethene | 1.7 | J |
| 108-90-7 | Chlorobenzene | 5.3 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.3 | U |
| 100-41-4 | Ethyl Benzene | 5.3 | U |
| 136777-61-2 | m/p-Xylenes | 5.3 | U |
| 95-47-6 | o-Xylene | 5.3 | U |
| 100-42-5 | Styrene | 5.3 | U |
| 75-25-2 | Bromoform | 5.3 | U |
| 98-82-8 | Isopropylbenzene | 5.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.3 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.3 | U |
| 108-86-1 | Bromobenzene | 5.3 | U |
| 103-65-1 | n-propylbenzene | 5.3 | U |
| 95-49-8 | 2-Chlorotoluene | 5.3 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.3 | U |
| 106-43-4 | 4-Chlorotoluene | 5.3 | U |
| 98-06-6 | tert-Butylbenzene | 5.3 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.3 | U |
| 135-98-8 | sec-Butylbenzene | 5.3 | U |
| 99-87-6 | p-Isopropyltoluene | 5.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.3 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.3 | U |
| 104-51-8 | n-Butylbenzene | 5.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.3 | U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 5.3 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.3 | U |
| 87-68-3 | Hexachlorobutadiene | 5.3 | U |
| 91-20-3 | Naphthalene | 5.3 | U |
| 1634-04-4 | Methyl tert-butyl Ether | 5.3 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SS22

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3832.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 5 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.3 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-001-SS22

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. L3772 Site: 36 SYLVE Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3832.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 5.3 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Number TICs found: 0

Concentration Units:
(ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-SS24

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O12

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3833.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 6 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 5.3 | U |
| 74-87-3 | Chloromethane | 5.3 | U |
| 75-01-4 | Vinyl Chloride | 5.3 | U |
| 74-83-9 | Bromomethane | 5.3 | U |
| 75-00-3 | Chloroethane | 5.3 | U |
| 75-69-4 | Trichlorofluoromethane | 5.3 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.3 | U |
| 67-64-1 | Acetone | 4.3 | JB |
| 75-15-0 | Carbon Disulfide | 5.3 | U |
| 75-09-2 | Methylene Chloride | 3 | J |
| 156-60-5 | trans-1,2-Dichloroethene | 5.3 | U |
| 108-05-4 | Vinyl Acetate | 26 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.3 | U |
| 78-93-3 | 2-Butanone | 5.3 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.3 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.3 | U |
| 74-97-5 | Bromochloromethane | 5.3 | U |
| 67-66-3 | Chloroform | 5.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.3 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.3 | U |
| 56-23-5 | Carbon Tetrachloride | 5.3 | U |
| 71-43-2 | Benzene | 5.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.3 | U |
| 79-01-6 | Trichloroethene | 5.3 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.3 | U |
| 74-95-3 | Dibromomethane | 5.3 | U |
| 75-27-4 | Bromodichloromethane | 5.3 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.3 | U |
| 108-88-3 | Toluene | 5.3 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 5.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.3 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.3 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SS24

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: L3772    Site: 36 SYLVES Location: LB12982    Group: 5970-VOA

Matrix: (soil/water) SOIL    Lab Sample ID: O12

Sample wt/vol: 5.0 (g/mL) G    Lab File ID: E3833.D

Level: (low/med) LOW    Date Received: 3/31/01

% Moisture: not dec. 6    Date Analyzed: 4/11/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL).

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 110-75-8 | 2-Chloroethyl vinyl ether | 5.3 | U |
| 591-78-6 | 2-Hexanone | 5.3 | U |
| 124-48-1 | Dibromochloromethane | 5.3 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.3 | U |
| 127-18-4 | Tetrachloroethene | 1.3 | J |
| 108-90-7 | Chlorobenzene | 5.3 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.3 | U |
| 100-41-4 | Ethyl Benzene | 5.3 | U |
| 136777-61-2 | m/p-Xylenes | 5.3 | U |
| 95-47-6 | o-Xylene | 5.3 | U |
| 100-42-5 | Styrene | 5.3 | U |
| 75-25-2 | Bromoform | 5.3 | U |
| 98-82-8 | Isopropylbenzene | 5.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.3 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.3 | U |
| 108-86-1 | Bromobenzene | 5.3 | U |
| 103-65-1 | n-propylbenzene | 5.3 | U |
| 95-49-8 | 2-Chlorotoluene | 5.3 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.3 | U |
| 106-43-4 | 4-Chlorotoluene | 5.3 | U |
| 98-06-6 | tert-Butylbenzene | 5.3 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.3 | U |
| 135-98-8 | sec-Butylbenzene | 5.3 | U |
| 99-87-6 | p-Isopropyltoluene | 5.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.3 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.3 | U |
| 104-51-8 | n-Butylbenzene | 5.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.3 | U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 5.3 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.3 | U |
| 87-68-3 | Hexachlorobutadiene | 5.3 | U |
| 91-20-3 | Naphthalene | 5.3 | U |
| 1634-04-4 | Methyl tert-butyl Ether | 5.3 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-SS24

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O12

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3833.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 6 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.3 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-UIW-001-SS24

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. L3772 Site: 36 SYLVE Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 012

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3833.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 5.6 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units:

Number TICs found: 0 (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SS24

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O13

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3829.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 5.2 | U |
| 74-87-3 | Chloromethane | 5.2 | U |
| 75-01-4 | Vinyl Chloride | 5.2 | U |
| 74-83-9 | Bromomethane | 5.2 | U |
| 75-00-3 | Chloroethane | 5.2 | U |
| 75-69-4 | Trichlorofluoromethane | 5.2 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.2 | U |
| 67-64-1 | Acetone | 5.2 | U |
| 75-15-0 | Carbon Disulfide | 5.2 | U |
| 75-09-2 | Methylene Chloride | 1.2 | J |
| 156-60-5 | trans-1,2-Dichloroethene | 5.2 | U |
| 108-05-4 | Vinyl Acetate | 26 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.2 | U |
| 78-93-3 | 2-Butanone | 5.2 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.2 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.2 | U |
| 74-97-5 | Bromochloromethane | 5.2 | U |
| 67-66-3 | Chloroform | 5.2 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.2 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.2 | U |
| 56-23-5 | Carbon Tetrachloride | 5.2 | U |
| 71-43-2 | Benzene | 5.2 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.2 | U |
| 79-01-6 | Trichloroethene | 5.2 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.2 | U |
| 74-95-3 | Dibromomethane | 5.2 | U |
| 75-27-4 | Bromodichloromethane | 5.2 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.2 | U |
| 108-88-3 | Toluene | 5.2 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 5.2 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.2 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.2 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SS24

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O13

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3829.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 110-75-8 | 2-Chloroethyl vinyl ether | 5.2 | U |
| 591-78-6 | 2-Hexanone | 5.2 | U |
| 124-48-1 | Dibromochloromethane | 5.2 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.2 | U |
| 127-18-4 | Tetrachloroethene | 5.2 | U |
| 108-90-7 | Chlorobenzene | 5.2 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.2 | U |
| 100-41-4 | Ethyl Benzene | 5.2 | U |
| 136777-61-2 | m/p-Xylenes | 5.2 | U |
| 95-47-6 | o-Xylene | 5.2 | U |
| 100-42-5 | Styrene | 5.2 | U |
| 75-25-2 | Bromoform | 5.2 | U |
| 98-82-8 | Isopropylbenzene | 5.2 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.2 | U |
| 108-86-1 | Bromobenzene | 5.2 | U |
| 103-65-1 | n-propylbenzene | 5.2 | U |
| 95-49-8 | 2-Chlorotoluene | 5.2 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.2 | U |
| 106-43-4 | 4-Chlorotoluene | 5.2 | U |
| 98-06-6 | tert-Butylbenzene | 5.2 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.2 | U |
| 135-98-8 | sec-Butylbenzene | 5.2 | U |
| 99-87-6 | p-Isopropyltoluene | 5.2 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.2 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.2 | U |
| 104-51-8 | n-Butylbenzene | 5.2 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.2 | U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 5.2 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.2 | U |
| 87-68-3 | Hexachlorobutadiene | 5.2 | U |
| 91-20-3 | Naphthalene | 5.2 | U |
| 1634-04-4 | Methyl tert-butyl Ether | 5.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SS24

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 013

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3829.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.2 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-001-SS24

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. L3772 Site: 36 SYLVE Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O13

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3829.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 3.7 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 1 (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 30.64 | 7.4 | JB |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

**096-UIW-001-SS32**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O13

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3829.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 5.2 | U |
| 74-87-3 | Chloromethane | 5.2 | U |
| 75-01-4 | Vinyl Chloride | 5.2 | U |
| 74-83-9 | Bromomethane | 5.2 | U |
| 75-00-3 | Chloroethane | 5.2 | U |
| 75-69-4 | Trichlorofluoromethane | 5.2 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.2 | U |
| 67-64-1 | Acetone | 5.2 | U |
| 75-15-0 | Carbon Disulfide | 5.2 | U |
| 75-09-2 | Methylene Chloride | 1.2 | J |
| 156-60-5 | trans-1,2-Dichloroethene | 5.2 | U |
| 108-05-4 | Vinyl Acetate | 26 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.2 | U |
| 78-93-3 | 2-Butanone | 5.2 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.2 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.2 | U |
| 74-97-5 | Bromochloromethane | 5.2 | U |
| 67-66-3 | Chloroform | 5.2 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.2 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.2 | U |
| 56-23-5 | Carbon Tetrachloride | 5.2 | U |
| 71-43-2 | Benzene | 5.2 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.2 | U |
| 79-01-6 | Trichloroethene | 5.2 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.2 | U |
| 74-95-3 | Dibromomethane | 5.2 | U |
| 75-27-4 | Bromodichloromethane | 5.2 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.2 | U |
| 108-88-3 | Toluene | 5.2 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 5.2 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.2 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.2 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.2 | U |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

**096-UIW-001-SS32**

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: L3772    Site: 36 SYLVES    Location: LB12982    Group: 5970-VOA

Matrix: (soil/water) SOIL    Lab Sample ID: O13

Sample wt/vol: 5.0 (g/mL) G    Lab File ID: E3829.D

Level: (low/med) LOW    Date Received: 3/31/01

% Moisture: not dec. 4    Date Analyzed: 4/11/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | Concentration (ug/Kg) | Q |
|---|---|---|---|
| 110-75-8 | 2-Chloroethyl vinyl ether | 5.2 | U |
| 591-78-6 | 2-Hexanone | 5.2 | U |
| 124-48-1 | Dibromochloromethane | 5.2 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.2 | U |
| 127-18-4 | Tetrachloroethene | 5.2 | U |
| 108-90-7 | Chlorobenzene | 5.2 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.2 | U |
| 100-41-4 | Ethyl Benzene | 5.2 | U |
| 136777-61-2 | m/p-Xylenes | 5.2 | U |
| 95-47-6 | o-Xylene | 5.2 | U |
| 100-42-5 | Styrene | 5.2 | U |
| 75-25-2 | Bromoform | 5.2 | U |
| 98-82-8 | Isopropylbenzene | 5.2 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.2 | U |
| 108-86-1 | Bromobenzene | 5.2 | U |
| 103-65-1 | n-propylbenzene | 5.2 | U |
| 95-49-8 | 2-Chlorotoluene | 5.2 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.2 | U |
| 106-43-4 | 4-Chlorotoluene | 5.2 | U |
| 98-06-6 | tert-Butylbenzene | 5.2 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.2 | U |
| 135-98-8 | sec-Butylbenzene | 5.2 | U |
| 99-87-6 | p-Isopropyltoluene | 5.2 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.2 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.2 | U |
| 104-51-8 | n-Butylbenzene | 5.2 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.2 | U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 5.2 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.2 | U |
| 87-68-3 | Hexachlorobutadiene | 5.2 | U |
| 91-20-3 | Naphthalene | 5.2 | U |
| 1634-04-4 | Methyl tert-butyl Ether | 5.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-UIW-001-SS32**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O13

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3829.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 4 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound. | Concentration (ug/Kg) | Q |
|---|---|---|---|
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.2 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

**096-UIW-001-SS32**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVE Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O13

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3829.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 3.7 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units:

Number TICs found: 1 (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 30.64 | 7.4 | JB |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SS45

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: L3772    Site: 36 SYLVES Location: LB12982    Group: 5970-VOA

Matrix: (soil/water) SOIL    Lab Sample ID: 014

Sample wt/vol: 5.0 (g/mL) G    Lab File ID: E3837.D

Level: (low/med) LOW    Date Received: 3/31/01

% Moisture: not dec. 11    Date Analyzed: 4/11/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 5.6 | U |
| 74-87-3 | Chloromethane | 5.6 | U |
| 75-01-4 | Vinyl Chloride | 5.6 | U |
| 74-83-9 | Bromomethane | 5.6 | U |
| 75-00-3 | Chloroethane | 5.6 | U |
| 75-69-4 | Trichlorofluoromethane | 5.6 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.6 | U |
| 67-64-1 | Acetone | 5.6 | U |
| 75-15-0 | Carbon Disulfide | 5.6 | U |
| 75-09-2 | Methylene Chloride | 1.3 | J |
| 156-60-5 | trans-1,2-Dichloroethene | 5.6 | U |
| 108-05-4 | Vinyl Acetate | 28 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.6 | U |
| 78-93-3 | 2-Butanone | 5.6 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.6 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.6 | U |
| 74-97-5 | Bromochloromethane | 5.6 | U |
| 67-66-3 | Chloroform | 5.6 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.6 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.6 | U |
| 56-23-5 | Carbon Tetrachloride | 5.6 | U |
| 71-43-2 | Benzene | 5.6 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.6 | U |
| 79-01-6 | Trichloroethene | 5.6 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.6 | U |
| 74-95-3 | Dibromomethane | 5.6 | U |
| 75-27-4 | Bromodichloromethane | 5.6 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.6 | U |
| 108-88-3 | Toluene | 5.6 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 5.6 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.6 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.6 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.6 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-SS45

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: O14

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3837.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 11 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 110-75-8 | 2-Chloroethyl vinyl ether | 5.6 | U |
| 591-78-6 | 2-Hexanone | 5.6 | U |
| 124-48-1 | Dibromochloromethane | 5.6 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.6 | U |
| 127-18-4 | Tetrachloroethene | 3.3 | J |
| 108-90-7 | Chlorobenzene | 5.6 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.6 | U |
| 100-41-4 | Ethyl Benzene | 5.6 | U |
| 136777-61-2 | m/p-Xylenes | 5.6 | U |
| 95-47-6 | o-Xylene | 5.6 | U |
| 100-42-5 | Styrene | 5.6 | U |
| 75-25-2 | Bromoform | 5.6 | U |
| 98-82-8 | Isopropylbenzene | 5.6 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.6 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.6 | U |
| 108-86-1 | Bromobenzene | 5.6 | U |
| 103-65-1 | n-propylbenzene | 5.6 | U |
| 95-49-8 | 2-Chlorotoluene | 5.6 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.6 | U |
| 106-43-4 | 4-Chlorotoluene | 5.6 | U |
| 98-06-6 | tert-Butylbenzene | 5.6 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.6 | U |
| 135-98-8 | sec-Butylbenzene | 5.6 | U |
| 99-87-6 | p-Isopropyltoluene | 5.6 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.6 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.6 | U |
| 104-51-8 | n-Butylbenzene | 5.6 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.6 | U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 5.6 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.6 | U |
| 87-68-3 | Hexachlorobutadiene | 5.6 | U |
| 91-20-3 | Naphthalene | 5.6 | U |
| 1634-04-4 | Methyl tert-butyl Ether | 5.6 | U |

IA
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-SS45

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: L3772 Site: 36 SYLVES Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 014

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3837.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 11 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.6 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-001-SS45

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. L3772 Site: 36 SYLVE Location: LB12982 Group: 5970-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 014

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E3837.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: not dec. 10.7 Date Analyzed: 4/11/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units:

Number TICs found: 2 (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 30.65 | 10 | JB |
| 2. | Unknown | 38.05 | 10 | J |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-GW-80

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O15

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A9887.D

Level: (low/med) ______ Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 90 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 130 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 330 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 240 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 3.7 | |
| 127-18-4 | Tetrachloroethene | 21 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-GW-8D

Lab Name: CHEMTECH  Contract: IMPACT ENV.

Project No.: L3772  Site: 36 SYLVES Location: LB13090  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O15

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: A9887.D

Level: (low/med) ______  Date Received: 3/31/01

% Moisture: not dec. 100  Date Analyzed: 4/10/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 0.3 | U |
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-UIW-001-GW-80

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No. L3772 Site: 36 SYLVE Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: 015

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A9887.D

Level: (low/med) ______ Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-GW-80DL

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O15DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0013.D

Level: (low/med) ______ Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/19/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 25.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 28 | UD |
| 75-01-4 | Vinyl Chloride | 26 | UD |
| 74-83-9 | Bromomethane | 15 | UD |
| 75-00-3 | Chloroethane | 19 | UD |
| 75-69-4 | Trichlorofluoromethane | 10 | UD |
| 75-35-4 | 1,1-Dichloroethene | 110 | D |
| 75-09-2 | Methylene Chloride | 8.8 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 11 | UD |
| 75-34-3 | 1,1-Dichloroethane | 150 | D |
| 67-66-3 | Chloroform | 6.4 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 420 | D |
| 56-23-5 | Carbon Tetrachloride | 7.6 | UD |
| 71-43-2 | Benzene | 6.8 | UD |
| 107-06-2 | 1,2-Dichloroethane | 8 | UD |
| 79-01-6 | Trichloroethene | 310 | D |
| 78-87-5 | 1,2-Dichloropropane | 10 | UD |
| 75-27-4 | Bromodichloromethane | 7.1 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 28 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 5.8 | UD |
| 108-88-3 | Toluene | 6.4 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 7.5 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 8.5 | UD |
| 127-18-4 | Tetrachloroethene | 23 | D |
| 124-48-1 | Dibromochloromethane | 7 | UD |
| 108-90-7 | Chlorobenzene | 6.2 | UD |
| 100-41-4 | Ethyl Benzene | 11 | UD |
| 95-47-6 | o-Xylene | 11 | UD |
| 136777-61-2 | m/p-Xylenes | 9.8 | UD |
| 75-25-2 | Bromoform | 8.7 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 6.4 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 9.7 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 7.6 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 5.5 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-GW-80DL

Lab Name: CHEMTECH    Contract: IMPACT ENV.

Project No.: L3772    Site: 36 SYLVES Location: LB13090    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O15DL

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: A0013.D

Level: (low/med) ______    Date Received: 3/31/01

% Moisture: not dec. 100    Date Analyzed: 4/19/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 25.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 6.9 | UD |
| 107-02-8 | Acrolein | 810 | UD |
| 107-13-1 | Acrylonitrile | 77 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-GW-76

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O16

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A9888.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 13 | |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 740 | E |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 1000 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1800 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 520 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 61 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-GW-70

Lab Name: CHEMTECH  Contract: IMPACT ENV.

Project No.: L3772  Site: 36 SYLVES Location: LB13090  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O16

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: A9888.D

Level: (low/med)  Date Received: 3/31/01

% Moisture: not dec. 100  Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 0.3 | U |
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-001-GW-70

Lab Name: CHEMTECH    Contract: IMPACT ENV.

Project No. L3772    Site: 36 SYLVE    Location: LB13090    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O16

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: A9888.D

Level: (low/med) ______    Date Received: 3/31/01

% Moisture: not dec. 100    Date Analyzed: 4/10/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units:
Number TICs found: 0    (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-GW-70DL

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O16DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0014.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/19/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 25.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 28 | UD |
| 75-01-4 | Vinyl Chloride | 26 | UD |
| 74-83-9 | Bromomethane | 15 | UD |
| 75-00-3 | Chloroethane | 19 | UD |
| 75-69-4 | Trichlorofluoromethane | 10 | UD |
| 75-35-4 | 1,1-Dichloroethene | 820 | D |
| 75-09-2 | Methylene Chloride | 8.8 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 11 | UD |
| 75-34-3 | 1,1-Dichloroethane | 1100 | D |
| 67-66-3 | Chloroform | 6.4 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 7600 | E |
| 56-23-5 | Carbon Tetrachloride | 7.6 | UD |
| 71-43-2 | Benzene | 6.8 | UD |
| 107-06-2 | 1,2-Dichloroethane | 8 | UD |
| 79-01-6 | Trichloroethene | 610 | D |
| 78-87-5 | 1,2-Dichloropropane | 10 | UD |
| 75-27-4 | Bromodichloromethane | 7.1 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 28 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 5.8 | UD |
| 108-88-3 | Toluene | 6.4 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 7.5 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 8.5 | UD |
| 127-18-4 | Tetrachloroethene | 68 | D |
| 124-48-1 | Dibromochloromethane | 7 | UD |
| 108-90-7 | Chlorobenzene | 6.2 | UD |
| 100-41-4 | Ethyl Benzene | 11 | UD |
| 95-47-6 | o-Xylene | 11 | UD |
| 136777-61-2 | m/p-Xylenes | 9.8 | UD |
| 75-25-2 | Bromoform | 8.7 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 6.4 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 9.7 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 7.6 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 5.5 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-001-GW-70DL

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O16DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0014.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/19/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 25.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 6.9 | UD |
| 107-02-8 | Acrolein | 810 | UD |
| 107-13-1 | Acrylonitrile | 77 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-GW-70DL

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O16DL1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0015.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 250.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 280 | UD |
| 75-01-4 | Vinyl Chloride | 260 | UD |
| 74-83-9 | Bromomethane | 150 | UD |
| 75-00-3 | Chloroethane | 190 | UD |
| 75-69-4 | Trichlorofluoromethane | 100 | UD |
| 75-35-4 | 1,1-Dichloroethene | 1000 | D |
| 75-09-2 | Methylene Chloride | 88 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 110 | UD |
| 75-34-3 | 1,1-Dichloroethane | 1400 | D |
| 67-66-3 | Chloroform | 64 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 11000 | D |
| 56-23-5 | Carbon Tetrachloride | 76 | UD |
| 71-43-2 | Benzene | 68 | UD |
| 107-06-2 | 1,2-Dichloroethane | 80 | UD |
| 79-01-6 | Trichloroethene | 810 | D |
| 78-87-5 | 1,2-Dichloropropane | 100 | UD |
| 75-27-4 | Bromodichloromethane | 71 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 280 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 58 | UD |
| 108-88-3 | Toluene | 64 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 75 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 85 | UD |
| 127-18-4 | Tetrachloroethene | 69 | UD |
| 124-48-1 | Dibromochloromethane | 70 | UD |
| 108-90-7 | Chlorobenzene | 62 | UD |
| 100-41-4 | Ethyl Benzene | 110 | UD |
| 95-47-6 | o-Xylene | 110 | UD |
| 136777-61-2 | m/p-Xylenes | 98 | UD |
| 75-25-2 | Bromoform | 87 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 64 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 97 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 76 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 55 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-001-GW-70DL1

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O16DL1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0015.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 250.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 69 | UD |
| 107-02-8 | Acrolein | 8100 | UD |
| 107-13-1 | Acrylonitrile | 770 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-GW80

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O18

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0016.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 88 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 75 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 390 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 1200 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 2 | |
| 127-18-4 | Tetrachloroethene | 64 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-GW80

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O18

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0016.D

Level: (low/med) ______ Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 0.3 | U |
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-002-GW80

Lab Name: CHEMTECH  Contract: IMPACT ENV.

Project No. L3772  Site: 36 SYLVE  Location: LB13090  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O18

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: A0016.D

Level: (low/med)  Date Received: 3/31/01

% Moisture: not dec. 100  Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

Concentration Units:
Number TICs found: 0  (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-GW80D

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O18DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0017.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 100.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 110 | UD |
| 75-01-4 | Vinyl Chloride | 100 | UD |
| 74-83-9 | Bromomethane | 61 | UD |
| 75-00-3 | Chloroethane | 74 | UD |
| 75-69-4 | Trichlorofluoromethane | 41 | UD |
| 75-35-4 | 1,1-Dichloroethene | 42 | UD |
| 75-09-2 | Methylene Chloride | 35 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 45 | UD |
| 75-34-3 | 1,1-Dichloroethane | 22 | UD |
| 67-66-3 | Chloroform | 26 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 480 | D |
| 56-23-5 | Carbon Tetrachloride | 30 | UD |
| 71-43-2 | Benzene | 27 | UD |
| 107-06-2 | 1,2-Dichloroethane | 32 | UD |
| 79-01-6 | Trichloroethene | 1700 | D |
| 78-87-5 | 1,2-Dichloropropane | 40 | UD |
| 75-27-4 | Bromodichloromethane | 29 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 110 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 23 | UD |
| 108-88-3 | Toluene | 26 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 30 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 34 | UD |
| 127-18-4 | Tetrachloroethene | 80 | D |
| 124-48-1 | Dibromochloromethane | 28 | UD |
| 108-90-7 | Chlorobenzene | 25 | UD |
| 100-41-4 | Ethyl Benzene | 42 | UD |
| 95-47-6 | o-Xylene | 46 | UD |
| 136777-61-2 | m/p-Xylenes | 39 | UD |
| 75-25-2 | Bromoform | 35 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 26 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 39 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 30 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 22 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-UIW-002-GW80D**

Lab Name: CHEMTECH    Contract: IMPACT ENV.

Project No.: L3772    Site: 36 SYLVES Location: LB13090    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O18DL

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: A0017.D

Level: (low/med) ______    Date Received: 3/31/01

% Moisture: not dec. 100    Date Analyzed: 4/20/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 100.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 28 | UD |
| 107-02-8 | Acrolein | 3200 | UD |
| 107-13-1 | Acrylonitrile | 310 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-GW70

Lab Name: CHEMTECH  Contract: IMPACT ENV.

Project No.: L3772  Site: 36 SYLVES Location: LB13090  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O19

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: A9890.D

Level: (low/med) ______  Date Received: 3/31/01

% Moisture: not dec. 100  Date Analyzed: 4/10/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 3.9 | |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 430 | E |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 450 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 2400 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 470 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 2.4 | |
| 127-18-4 | Tetrachloroethene | 49 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-GW70

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O19

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A9890.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 0.3 | U |
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
**096-UIW-002-GW70**

Lab Name: CHEMTECH    Contract: IMPACT ENV.

Project No. L3772    Site: 36 SYLVE Location: LB13090    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O19

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: A9890.D

Level: (low/med) ______    Date Received: 3/31/01

% Moisture: not dec. 100    Date Analyzed: 4/10/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units:
Number TICs found: 0    (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-GW70D

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O19DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0018.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 25.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 28 | UD |
| 75-01-4 | Vinyl Chloride | 26 | UD |
| 74-83-9 | Bromomethane | 15 | UD |
| 75-00-3 | Chloroethane | 19 | UD |
| 75-69-4 | Trichlorofluoromethane | 10 | UD |
| 75-35-4 | 1,1-Dichloroethene | 440 | D |
| 75-09-2 | Methylene Chloride | 8.8 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 11 | UD |
| 75-34-3 | 1,1-Dichloroethane | 490 | D |
| 67-66-3 | Chloroform | 6.4 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 3700 | E |
| 56-23-5 | Carbon Tetrachloride | 7.6 | UD |
| 71-43-2 | Benzene | 6.8 | UD |
| 107-06-2 | 1,2-Dichloroethane | 8 | UD |
| 79-01-6 | Trichloroethene | 530 | D |
| 78-87-5 | 1,2-Dichloropropane | 10 | UD |
| 75-27-4 | Bromodichloromethane | 7.1 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 28 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 5.8 | UD |
| 108-88-3 | Toluene | 6.4 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 7.5 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 8.5 | UD |
| 127-18-4 | Tetrachloroethene | 47 | D |
| 124-48-1 | Dibromochloromethane | 7 | UD |
| 108-90-7 | Chlorobenzene | 6.2 | UD |
| 100-41-4 | Ethyl Benzene | 11 | UD |
| 95-47-6 | o-Xylene | 11 | UD |
| 136777-61-2 | m/p-Xylenes | 9.8 | UD |
| 75-25-2 | Bromoform | 8.7 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 6.4 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 9.7 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 7.6 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 5.5 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-GW70D

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O19DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0018.D

Level: (low/med) ______ Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 25.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 6.9 | UD |
| 107-02-8 | Acrolein | 810 | UD |
| 107-13-1 | Acrylonitrile | 77 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-GW70D

Lab Name: CHEMTECH  Contract: IMPACT ENV.

Project No.: L3772  Site: 36 SYLVES Location: LB13090  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O19DL1

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: A0019.D

Level: (low/med)  Date Received: 3/31/01

% Moisture: not dec. 100  Date Analyzed: 4/20/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 250.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 280 | UD |
| 75-01-4 | Vinyl Chloride | 260 | UD |
| 74-83-9 | Bromomethane | 150 | UD |
| 75-00-3 | Chloroethane | 190 | UD |
| 75-69-4 | Trichlorofluoromethane | 100 | UD |
| 75-35-4 | 1,1-Dichloroethene | 270 | D |
| 75-09-2 | Methylene Chloride | 88 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 110 | UD |
| 75-34-3 | 1,1-Dichloroethane | 56 | UD |
| 67-66-3 | Chloroform | 64 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 3800 | D |
| 56-23-5 | Carbon Tetrachloride | 76 | UD |
| 71-43-2 | Benzene | 68 | UD |
| 107-06-2 | 1,2-Dichloroethane | 80 | UD |
| 79-01-6 | Trichloroethene | 530 | D |
| 78-87-5 | 1,2-Dichloropropane | 100 | UD |
| 75-27-4 | Bromodichloromethane | 71 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 280 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 58 | UD |
| 108-88-3 | Toluene | 64 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 75 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 85 | UD |
| 127-18-4 | Tetrachloroethene | 69 | UD |
| 124-48-1 | Dibromochloromethane | 70 | UD |
| 108-90-7 | Chlorobenzene | 62 | UD |
| 100-41-4 | Ethyl Benzene | 110 | UD |
| 95-47-6 | o-Xylene | 110 | UD |
| 136777-61-2 | m/p-Xylenes | 98 | UD |
| 75-25-2 | Bromoform | 87 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 64 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 97 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 76 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 55 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-GW70D

Lab Name: CHEMTECH    Contract: IMPACT ENV.

Project No.: L3772    Site: 36 SYLVES Location: LB13090    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O19DL1

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: A0019.D

Level: (low/med) ______    Date Received: 3/31/01

% Moisture: not dec. 100    Date Analyzed: 4/20/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 250.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 69 | UD |
| 107-02-8 | Acrolein | 8100 | UD |
| 107-13-1 | Acrylonitrile | 770 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-GW60

Lab Name: CHEMTECH    Contract: IMPACT ENV.

Project No.: L3772    Site: 36 SYLVES Location: LB13090    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O20

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: A9891.D

Level: (low/med)    Date Received: 3/31/01

% Moisture: not dec. 100    Date Analyzed: 4/10/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: (uL)    Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 8.9 | |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 240 | E |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 710 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 2500 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 120 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 7.6 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-GW60

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O20

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A9891.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 0.3 | U |
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-002-GW60

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No. L3772 Site: 36 SYLVE Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O20

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A9891.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/10/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

**096-UIW-002-GW60D**

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O20DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0020.D

Level: (low/med) ______ Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 25.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 28 | UD |
| 75-01-4 | Vinyl Chloride | 26 | UD |
| 74-83-9 | Bromomethane | 15 | UD |
| 75-00-3 | Chloroethane | 19 | UD |
| 75-69-4 | Trichlorofluoromethane | 10 | UD |
| 75-35-4 | 1,1-Dichloroethene | 250 | D |
| 75-09-2 | Methylene Chloride | 8.8 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 11 | UD |
| 75-34-3 | 1,1-Dichloroethane | 860 | D |
| 67-66-3 | Chloroform | 6.4 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 4500 | E |
| 56-23-5 | Carbon Tetrachloride | 7.6 | UD |
| 71-43-2 | Benzene | 6.8 | UD |
| 107-06-2 | 1,2-Dichloroethane | 8 | UD |
| 79-01-6 | Trichloroethene | 120 | D |
| 78-87-5 | 1,2-Dichloropropane | 10 | UD |
| 75-27-4 | Bromodichloromethane | 7.1 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 28 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 5.8 | UD |
| 108-88-3 | Toluene | 6.4 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 7.5 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 8.5 | UD |
| 127-18-4 | Tetrachloroethene | 6.9 | UD |
| 124-48-1 | Dibromochloromethane | 7 | UD |
| 108-90-7 | Chlorobenzene | 6.2 | UD |
| 100-41-4 | Ethyl Benzene | 11 | UD |
| 95-47-6 | o-Xylene | 11 | UD |
| 136777-61-2 | m/p-Xylenes | 9.8 | UD |
| 75-25-2 | Bromoform | 8.7 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 6.4 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 9.7 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 7.6 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 5.5 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-GW60D

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O20DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0020.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 25.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 6.9 | UD |
| 107-02-8 | Acrolein | 810 | UD |
| 107-13-1 | Acrylonitrile | 77 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-GW60D

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O20DL1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0021.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 250.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 280 | UD |
| 75-01-4 | Vinyl Chloride | 260 | UD |
| 74-83-9 | Bromomethane | 150 | UD |
| 75-00-3 | Chloroethane | 190 | UD |
| 75-69-4 | Trichlorofluoromethane | 100 | UD |
| 75-35-4 | 1,1-Dichloroethene | 130 | D |
| 75-09-2 | Methylene Chloride | 88 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 110 | UD |
| 75-34-3 | 1,1-Dichloroethane | 970 | D |
| 67-66-3 | Chloroform | 64 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 5700 | D |
| 56-23-5 | Carbon Tetrachloride | 76 | UD |
| 71-43-2 | Benzene | 68 | UD |
| 107-06-2 | 1,2-Dichloroethane | 80 | UD |
| 79-01-6 | Trichloroethene | 150 | D |
| 78-87-5 | 1,2-Dichloropropane | 100 | UD |
| 75-27-4 | Bromodichloromethane | 71 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 280. | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 58 | UD |
| 108-88-3 | Toluene | 64 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 75 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 85 | UD |
| 127-18-4 | Tetrachloroethene | 69 | UD |
| 124-48-1 | Dibromochloromethane | 70 | UD |
| 108-90-7 | Chlorobenzene | 62 | UD |
| 100-41-4 | Ethyl Benzene | 110 | UD |
| 95-47-6 | o-Xylene | 110 | UD |
| 136777-61-2 | m/p-Xylenes | 98 | UD |
| 75-25-2 | Bromoform | 87 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 64 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 97 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 76 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 55 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-GW60D

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O20DL1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A0021.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 250.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 69 | UD |
| 107-02-8 | Acrolein | 8100 | UD |
| 107-13-1 | Acrylonitrile | 770 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-TRIPBLANK 3-29-

Lab Name: CHEMTECH    Contract: IMPACT ENV.

Project No.: L3772    Site: 36 SYLVES Location: LB13090    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O21

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: A9883.D

Level: (low/med) ______    Date Received: 3/31/01

% Moisture: not dec. 100    Date Analyzed: 4/9/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.4 | U |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 0.3 | U |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 0.4 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-TRIPBLANK 3-29-

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O21

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A9883.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/9/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 0.3 | U |
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-TRIPBLANK 3-29-

Lab Name: CHEMTECH    Contract: IMPACT ENV.

Project No. L3772    Site: 36 SYLVE    Location: LB13090    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O21

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: A9883.D

Level: (low/med) ____    Date Received: 3/31/01

% Moisture: not dec. 100    Date Analyzed: 4/9/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)    Soil Aliquot Volume: ____ (uL)

Number TICs found: 0    Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-GWFLD 3-29
UN 4/24

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O22

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A9884.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/9/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.4 | U |
| 75-09-2 | Methylene Chloride | 2 | |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 0.3 | U |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 0.4 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-UIW-002-GWFLD 3-39

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No.: L3772 Site: 36 SYLVES Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O22

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A9884.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/9/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 0.3 | U |
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-002-GWFLD 3-39 4/24/01

Lab Name: CHEMTECH Contract: IMPACT ENV.

Project No. L3772 Site: 36 SYLVE Location: LB13090 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O22

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: A9884.D

Level: (low/med) Date Received: 3/31/01

% Moisture: not dec. 100 Date Analyzed: 4/9/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

**096-UIW-002-SSC22**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENT

Project No.: L3772 Site: 36 SYLVEST Location: LB13046 Group: 096-UIW-00

Matrix: (soil/water) SOIL Lab Sample ID: O03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BJ041220.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: 5 decanted: (Y/N): N Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 111-44-4 | bis(2-Chloroethyl)ether | 350 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 350 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 350 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 350 | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 350 | U |
| 621-64-7 | n-Nitroso-di-n-propylamine | 350 | U |
| 67-72-1 | Hexachloroethane | 350 | U |
| 98-95-3 | Nitrobenzene | 350 | U |
| 78-59-1 | Isophorone | 350 | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 350 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 350 | U |
| 91-20-3 | Naphthalene | 350 | U |
| 106-47-8 | 4-Chloroaniline | 350 | U |
| 87-68-3 | Hexachlorobutadiene | 350 | U |
| 91-57-6 | 2-Methylnaphthalene | 350 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 350 | U |
| 91-58-7 | 2-Chloronaphthalene | 350 | U |
| 88-74-4 | 2-Nitroaniline | 350 | U |
| 131-11-3 | Dimethylphthalate | 350 | U |
| 208-96-8 | Acenaphthylene | 350 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 350 | U |
| 99-09-2 | 3-Nitroaniline | 350 | U |
| 83-32-9 | Acenaphthene | 350 | U |
| 132-64-9 | Dibenzofuran | 350 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 350 | U |
| 84-66-2 | Diethylphthalate | 350 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 350 | U |
| 86-73-7 | Fluorene | 350 | U |
| 100-01-6 | 4-Nitroaniline | 350 | U |
| 86-30-6 | n-Nitrosodiphenylamine | 350 | U |
| 122-66-7 | Azobenzene | 350 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 350 | U |
| 118-74-1 | Hexachlorobenzene | 350 | U |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-SSC22

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENT

Project No.: L3772  Site: 36 SYLVEST Location: LB13046  Group: 096-UIW-00

Matrix: (soil/water) SOIL  Lab Sample ID: O03

Sample wt/vol: 30.0 (g/mL) G  Lab File ID: BJ041220.D

Level: (low/med) LOW  Date Received: 3/31/01

% Moisture: 5  decanted: (Y/N): N  Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL)  Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL)  Dilution Factor: 1.0

GPC Cleanup: (Y/N) N  pH: 

Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS No. | Compound | ug/Kg | Q |
|---|---|---|---|
| 85-01-8 | Phenanthrene | 350 | U |
| 120-12-7 | Anthracene | 350 | U |
| 84-74-2 | Di-n-butylphthalate | 350 | U |
| 206-44-0 | Fluoranthene | 350 | U |
| 129-00-0 | Pyrene | 350 | U |
| 85-68-7 | Butylbenzylphthalate | 350 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 350 | U |
| 56-55-3 | Benzo(a)anthracene | 350 | U |
| 218-01-9 | Chrysene | 350 | U |
| 117-81-7 | Bis(2-Ethylhexyl)phthalate | 570 | |
| 117-84-0 | Di-n-octyl phthalate | 350 | U |
| 205-99-2 | Benzo(b)fluoranthene | 350 | U |
| 207-08-9 | Benzo(k)fluoranthene | 350 | U |
| 50-32-8 | Benzo(a)pyrene | 350 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 350 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 350 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 350 | U |

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-UIW-002-SSC22

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENT

Project No.: L3772 Site: 36 SYLVE Location: LB13046 Group: 096-UIW-0

Matrix: (soil/water) SOIL Lab Sample ID: O03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BJ041220.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: 5 decanted: (Y/N) N Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 20 Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 16747-30-1 | Hexane, 2,4,4-trimethyl- | 11.68 | 710 | J |
| 2. 17301-26-7 | Undecane, 2,9-dimethyl- | 11.81 | 560 | J |
| 3. 62016-37-9 | Octane, 2,4,6-trimethyl- | 12.20 | 3800 | J |
| 4. 17312-55-9 | Decane, 3,8-dimethyl- | 12.73 | 4100 | J |
| 5. 61141-80-8 | Cyclohexane, 1,2-diethyl-3-m | 12.83 | 1100 | J |
| 6. 65149-85-1 | Cyclohexane, 1,1'-[1,2-bis(1 | 12.90 | 1500 | J |
| 7. 17312-75-3 | Nonane, 5-methyl-5-propyl- | 13.04 | 3000 | J |
| 8. | Unknown | 13.26 | 800 | J |
| 9. 13475-82-6 | Heptane, 2,2,4,6,6-pentameth | 13.41 | 1900 | J |
| 10. | Unknown | 13.47 | 1200 | J |
| 11. 594-38-7 | Butane, 2-iodo-2-methyl- | 13.82 | 1100 | J |
| 12. 10276-21-8 | 7-Oxabicyclo[4.1.0]heptan-2- | 13.90 | 770 | J |
| 13. 17312-55-9 | Decane, 3,8-dimethyl- | 14.12 | 650 | J |
| 14. | Unknown | 14.23 | 720 | J |
| 15. 1460-02-2 | Benzene, 1,3,5-tri-tert-buty | 14.37 | 950 | J |
| 16. 6703-81-7 | Heneicosane, 11-cyclopentyl- | 14.90 | 760 | J |
| 17. 25154-52-3 | Phenol, nonyl- | 18.29 | 1100 | J |
| 18. 136-83-4 | 2-Nonylphenol | 18.52 | 790 | J |
| 19. | Unknown | 18.93 | 950 | J |
| 20. | Unknown | 19.03 | 560 | J |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-UIW-002-SSC18**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENT

Project No.: L3772 Site: 36 SYLVEST Location: LB13046 Group: 096-UIW-00

Matrix: (soil/water) SOIL Lab Sample ID: O09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BJ041221.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: 26 decanted: (Y/N): N Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 111-44-4 | bis(2-Chloroethyl)ether | 450 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 450 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 450 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 300 | J |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 450 | U |
| 621-64-7 | n-Nitroso-di-n-propylamine | 450 | U |
| 67-72-1 | Hexachloroethane | 450 | U |
| 98-95-3 | Nitrobenzene | 450 | U |
| 78-59-1 | Isophorone | 450 | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 450 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 450 | U |
| 91-20-3 | Naphthalene | 450 | U |
| 106-47-8 | 4-Chloroaniline | 140 | J |
| 87-68-3 | Hexachlorobutadiene | 450 | U |
| 91-57-6 | 2-Methylnaphthalene | 450 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 450 | U |
| 91-58-7 | 2-Chloronaphthalene | 450 | U |
| 88-74-4 | 2-Nitroaniline | 450 | U |
| 131-11-3 | Dimethylphthalate | 450 | U |
| 208-96-8 | Acenaphthylene | 450 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 450 | U |
| 99-09-2 | 3-Nitroaniline | 450 | U |
| 83-32-9 | Acenaphthene | 450 | U |
| 132-64-9 | Dibenzofuran | 450 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 450 | U |
| 84-66-2 | Diethylphthalate | 450 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 450 | U |
| 86-73-7 | Fluorene | 51 | J |
| 100-01-6 | 4-Nitroaniline | 450 | U |
| 86-30-6 | n-Nitrosodiphenylamine | 450 | U |
| 122-66-7 | Azobenzene | 450 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 450 | U |
| 118-74-1 | Hexachlorobenzene | 450 | U |

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

**096-UIW-002-SSC18**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENT

Project No.: L3772 Site: 36 SYLVEST Location: LB13046 Group: 096-UIW-00

Matrix: (soil/water) SOIL Lab Sample ID: O09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BJ041221.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: 26 decanted: (Y/N): N Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 85-01-8 | Phenanthrene | 310 | J |
| 120-12-7 | Anthracene | 69 | J |
| 84-74-2 | Di-n-butylphthalate | 450 | U |
| 206-44-0 | Fluoranthene | 250 | J |
| 129-00-0 | Pyrene | 290 | J |
| 85-68-7 | Butylbenzylphthalate | 450 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 450 | U |
| 56-55-3 | Benzo(a)anthracene | 450 | U |
| 218-01-9 | Chrysene | 450 | U |
| 117-81-7 | Bis(2-Ethylhexyl)phthalate | 310 | J |
| 117-84-0 | Di-n-octyl phthalate | 450 | U |
| 205-99-2 | Benzo(b)fluoranthene | 450 | U |
| 207-08-9 | Benzo(k)fluoranthene | 450 | U |
| 50-32-8 | Benzo(a)pyrene | 450 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 450 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 450 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 450 | U |

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
**096-UIW-002-SSC18**

Lab Name: CHEMTECH   Contract: IMPACT ENVIRONMENT

Project No.: L3772   Site: 36 SYLVE   Location: LB13046   Group: 096-UIW-0

Matrix: (soil/water) SOIL   Lab Sample ID: O09

Sample wt/vol: 30.0 (g/mL) G   Lab File ID: BJ041221.D

Level: (low/med) LOW   Date Received: 3/31/01

% Moisture: 26   decanted: (Y/N) N   Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL)   Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL)   Dilution Factor: 1.0

GPC Cleanup: (Y/N) N   pH:

Number TICs found: 20   Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 1071-26-7 | Heptane, 2,2-dimethyl- | 8.02 | 540 | J |
| 2. 629-94-7 | Heneicosane | 10.05 | 520 | J |
| 3. 62238-01-1 | Decane, 2,2,8-trimethyl- | 10.17 | 860 | J |
| 4. 7154-80-5 | Heptane, 3,3,5-trimethyl- | 12.00 | 690 | J |
| 5. 62338-16-3 | Decane, 3,3,8-trimethyl- | 12.12 | 690 | J |
| 6. 594-38-7 | Butane, 2-iodo-2-methyl- | 12.68 | 1200 | J |
| 7. 31081-17-1 | Nonane, 2-methyl-5-propyl- | 12.98 | 2300 | J |
| 8. 17301-31-4 | Undecane, 3,9-dimethyl- | 13.13 | 1000 | J |
| 9. 1071-31-4 | 2,2,7,7-Tetramethyloctane | 13.35 | 1400 | J |
| 10. | Unknown | 13.42 | 760 | J |
| 11. 629-50-5 | Tridecane | 13.76 | 720 | J |
| 12. | Unknown | 13.83 | 550 | J |
| 13. 638-36-8 | Hexadecane, 2,6,10,14-tetram | 14.07 | 620 | J |
| 14. 25154-52-3 | Phenol, nonyl- | 18.26 | 890 | J |
| 15. 36728-72-0 | 28-Nor-17.beta.(H)-hopane | 31.78 | 900 | J |
| 16. 80-97-7 | Cholestanol | 31.96 | 6100 | J |
| 17. | Coprostan-3-one | 32.28 | 2800 | J |
| 18. | Unknown | 32.47 | 770 | J |
| 19. 2089-02-3 | Cholestane, 3-ethoxy-, (3.be | 33.72 | 880 | J |
| 20. | Unknown | 34.15 | 680 | J |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

FORM I SV-TIC   3/90

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-SSC18RE

Lab Name: CHEMTECH   Contract: IMPACT ENVIRONMENT

Project No.: L3772   Site: 36 SYLVEST   Location: LB13046   Group: 096-UIW-00

Matrix: (soil/water) SOIL   Lab Sample ID: O09RE

Sample wt/vol: 30.0 (g/mL) G   Lab File ID: BJ041227.D

Level: (low/med) LOW   Date Received: 3/31/01

% Moisture: 26   decanted: (Y/N): N   Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL)   Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL)   Dilution Factor: 1.0

GPC Cleanup: (Y/N) N   pH:

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 111-44-4 | bis(2-Chloroethyl)ether | 450 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 450 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 450 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 290 | J |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 450 | U |
| 621-64-7 | n-Nitroso-di-n-propylamine | 450 | U |
| 67-72-1 | Hexachloroethane | 450 | U |
| 98-95-3 | Nitrobenzene | 450 | U |
| 78-59-1 | Isophorone | 450 | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 450 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 450 | U |
| 91-20-3 | Naphthalene | 450 | U |
| 106-47-8 | 4-Chloroaniline | 200 | J |
| 87-68-3 | Hexachlorobutadiene | 450 | U |
| 91-57-6 | 2-Methylnaphthalene | 450 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 450 | U |
| 91-58-7 | 2-Chloronaphthalene | 450 | U |
| 88-74-4 | 2-Nitroaniline | 450 | U |
| 131-11-3 | Dimethylphthalate | 450 | U |
| 208-96-8 | Acenaphthylene | 450 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 450 | U |
| 99-09-2 | 3-Nitroaniline | 450 | U |
| 83-32-9 | Acenaphthene | 450 | U |
| 132-64-9 | Dibenzofuran | 450 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 450 | U |
| 84-66-2 | Diethylphthalate | 450 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 450 | U |
| 86-73-7 | Fluorene | 52 | J |
| 100-01-6 | 4-Nitroaniline | 450 | U |
| 86-30-6 | n-Nitrosodiphenylamine | 450 | U |
| 122-66-7 | Azobenzene | 450 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 450 | U |
| 118-74-1 | Hexachlorobenzene | 450 | U |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-UIW-002-SSC18RE

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENT

Project No.: L3772 Site: 36 SYLVEST Location: LB13046 Group: 096-UIW-00

Matrix: (soil/water) SOIL Lab Sample ID: O09RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BJ041227.D

Level: (low/med) LOW Date Received: 3/31/01

% Moisture: 26 decanted: (Y/N): N Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 85-01-8 | Phenanthrene | 300 | J |
| 120-12-7 | Anthracene | 67 | J |
| 84-74-2 | Di-n-butylphthalate | 450 | U |
| 206-44-0 | Fluoranthene | 250 | J |
| 129-00-0 | Pyrene | 280 | J |
| 85-68-7 | Butylbenzylphthalate | 450 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 450 | U |
| 56-55-3 | Benzo(a)anthracene | 450 | U |
| 218-01-9 | Chrysene | 450 | U |
| 117-81-7 | Bis(2-Ethylhexyl)phthalate | 340 | J |
| 117-84-0 | Di-n-octyl phthalate | 450 | U |
| 205-99-2 | Benzo(b)fluoranthene | 83 | J |
| 207-08-9 | Benzo(k)fluoranthene | 140 | J |
| 50-32-8 | Benzo(a)pyrene | 72 | J |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 450 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 450 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 450 | U |

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
**096-UIW-002-SSC18F**

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENT

Project No.: L3772    Site: 36 SYLVE    Location: LB13046    Group: 096-UIW-0

Matrix: (soil/water) SOIL    Lab Sample ID: O09RE

Sample wt/vol: 30.0 (g/mL) G    Lab File ID: BJ041227.D

Level: (low/med) LOW    Date Received: 3/31/01

% Moisture: 26    decanted: (Y/N) N    Date Extracted: 4/10/01

Concentrated Extract Volume: 1000 (uL)    Date Analyzed: 4/13/01

Injection Volume: 2.0 (uL)    Dilution Factor: 1.0

GPC Cleanup: (Y/N) N    pH: 

Number TICs found: 20    Concentration Units: (ug/L or ug/Kg) ug/Kg

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 62108-25-2 | Decane, 2,6,7-trimethyl- | 8.03 | 540 | J |
| 2. 62237-96-1 | Decane, 2,2,5-trimethyl- | 10.17 | 840 | J |
| 3. 17301-28-9 | Undecane, 3,6-dimethyl- | 12.00 | 680 | J |
| 4. 62338-16-3 | Decane, 3,3,8-trimethyl- | 12.12 | 650 | J |
| 5. 594-38-7 | Butane, 2-iodo-2-methyl- | 12.69 | 1100 | J |
| 6. 1921-70-6 | Pentadecane, 2,6,10,14-tetra | 13.00 | 2400 | J |
| 7. 17312-57-1 | Dodecane, 3-methyl- | 13.13 | 1000 | J |
| 8. 62237-97-2 | Decane, 2,2,6-trimethyl- | 13.35 | 1400 | J |
| 9. 13475-82-6 | Heptane, 2,2,4,6,6-pentameth | 13.43 | 760 | J |
| 10. 18344-37-1 | Heptadecane, 2,6,10,14-tetra | 13.76 | 720 | J |
| 11. 7098-21-7 | Tritetracontane | 13.84 | 540 | J |
| 12. | Unknown | 14.07 | 620 | J |
| 13. 629-78-7 | Heptadecane | 18.26 | 860 | J |
| 14. 25154-52-3 | Phenol, nonyl- | 18.51 | 510 | J |
| 15. | Unknown | 31.76 | 900 | J |
| 16. 80-97-7 | Cholestanol | 31.96 | 7700 | J |
| 17. | Unknown | 32.28 | 3000 | J |
| 18. | Unknown | 32.48 | 710 | J |
| 19. 2089-02-3 | Cholestane, 3-ethoxy-, (3.be | 33.72 | 830 | J |
| 20. | Unknown | 34.18 | 700 | J |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

CHEMTECH, 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel(732)225-4111,Fax(732)225-4110

TABULATED ANALYTICAL REPORT
QUALITATIVE GC FINGERPRINT BY 8015

Project Name: 36 SYLVESTER STREET
CLIENT: IMPACT ENVIRONMENTAL

Lab Project: L3772

MATRIX: WATER
Date Received: 3/31/01
Date Extracted: 4/11/01
Date Analysed: 4/12/01
Date Reported: 4/13/01
Analyst: A.A.

| CLIENT ID | FILE ID | | LAB ID | | FUEL TYPE |
|---|---|---|---|---|---|
| 096-FD-003-CO | BA2715 | | L3772-17 | | E |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

COMMENTS:
FT: FUEL TYPE
MDL= METHOD DETECTION LIMIT
A=GASOLINE
B= KERSOENE WITH SOME UNKNOWN FUEL OIL
C= #2 FUEL OIL
D= #4 FUEL OIL
E= NO CALIBRATED FUEL TYPE DETECTED
F=KEROSENE
H= #6 FUEL OIL
P= CLIENT KNOWN FUEL PRODUCT
KW KEROSENE WEATHERED
PI= PAINT THINNER
MS= MINERAL SPIRITS

< = LESS THAN
J= 10 W LUBRICATING OIL
K= 20 W LUBRICATING OIL
L= 30W LUBRICATING OIL
M= 40 W LUBRICATING OIL
CW= #2 FUEL OIL WEATHERED
DW= #4 FUEL OIL WEATHERED
HW= #6 FUEL OIL, WEATHERED
ND = NOT DETECTED (CONC)
CS = CLIENT STANDARD
N = JET FUEL STANDARD
S= DIESEL
CT=COAL TAR

U.S. EPA - CLP
1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

096-UIW-002-SSC22

Lab Name: CHEMTECH EDISON

Contract: 68-W00-088

Lab Code: CHEMED Case No.: SAS No.: SDG No.: L3772

Matrix (soil/water): SOIL Lab Sample ID: L3772-03 S

Level (low/med): LOW Date Received: 03/31/01

% Solids: 95.2

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 683 | | | P |
| 7440-36-0 | Antimony | 0.62 | U | | P |
| 7440-38-2 | Arsenic | 0.57 | U | | P |
| 7440-39-3 | Barium | 17.5 | B | | P |
| 7440-41-7 | Beryllium | 0.16 | U | | P |
| 7440-43-9 | Cadmium | 0.11 | U | | P |
| 7440-70-2 | Calcium | 347 | B | | P |
| 7440-47-3 | Chromium | 2.4 | | | P |
| 7440-48-4 | Cobalt | 0.27 | B | | P |
| 7440-50-8 | Copper | 17.1 | | | P |
| 7439-89-6 | Iron | 2150 | | | P |
| 7439-92-1 | Lead | 7.9 | | | P |
| 7439-95-4 | Magnesium | 107 | B | | P |
| 7439-96-5 | Manganese | 4.4 | | | P |
| 7439-97-6 | Mercury | 0.04 | U | | CV |
| 7440-02-0 | Nickel | 0.88 | B | | P |
| 7440-09-7 | Potassium | 46.1 | B | | P |
| 7782-49-2 | Selenium | 0.34 | U | | P |
| 7440-22-4 | Silver | 0.21 | B | | P |
| 7440-23-5 | Sodium | 62.1 | B | | P |
| 7440-28-0 | Thallium | 0.55 | U | | P |
| 7440-62-2 | Vanadium | 2.0 | B | | P |
| 7440-66-6 | Zinc | 9.2 | | | P |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

U.S. EPA - CLP
1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

096-UIW-001-SSC18

Lab Name: CHEMTECH EDISON

Contract: 68-W00-088

Lab Code: CHEMED Case No.: SAS No.: SDG No.: L3772

Matrix (soil/water): SOIL Lab Sample ID: L3772-09 S

Level (low/med): LOW Date Received: 03/31/01

% Solids: 73.7

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 2880 | | | P |
| 7440-36-0 | Antimony | 1.9 | B | | P |
| 7440-38-2 | Arsenic | 1.5 | | | P |
| 7440-39-3 | Barium | 46.4 | | | P |
| 7440-41-7 | Beryllium | 0.22 | B | | P |
| 7440-43-9 | Cadmium | 6.8 | | | P |
| 7440-70-2 | Calcium | 2090 | | | P |
| 7440-47-3 | Chromium | 81.3 | | | P |
| 7440-48-4 | Cobalt | 1.9 | B | | P |
| 7440-50-8 | Copper | 958 | | | P |
| 7439-89-6 | Iron | 3170 | | | P |
| 7439-92-1 | Lead | 255 | | | P |
| 7439-95-4 | Magnesium | 967 | | | P |
| 7439-96-5 | Manganese | 113 | | | P |
| 7439-97-6 | Mercury | 1.8 | | | CV |
| 7440-02-0 | Nickel | 10.3 | | | P |
| 7440-09-7 | Potassium | 126 | B | | P |
| 7782-49-2 | Selenium | 0.84 | | | P |
| 7440-22-4 | Silver | 7.3 | | | P |
| 7440-23-5 | Sodium | 148 | B | | P |
| 7440-28-0 | Thallium | 0.71 | U | | P |
| 7440-62-2 | Vanadium | 6.2 | B | | P |
| 7440-66-6 | Zinc | 331 | | | P |

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

CHEMTECH 284 Sheffield Street • Mountainside, NJ 07092 Phone: 908.789.8900 Fax: 908.789.8922

# DATA PACKAGE FOR RESULTS SUMMARY



## PROJECT NAME: 36 SYLVESTER STREET SITE
## PROJECT # 00-96

IMPACT ENVIRONMENTAL
1 VILLAGE PLAZA
KINGS PARK, NY 11754
631-269-8800

| | |
|---|---|
| CHEMTECH PROJECT | N5202ASP |
| ATTENTION | KEVIN KLEAKA |

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 096-FLDBLK-7/9/0

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O01

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071911.D

Level: (low/med)  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/19/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.4 | U |
| 75-09-2 | Methylene Chloride | 1.2 | |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 3.9 | |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 0.4 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-FLDBLK-7/9/0

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071911.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/19/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-FLDBLK-7/9/0

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No. N5202  Site: 36 SYLVE  Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O01

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071911.D

Level: (low/med)  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/19/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

Number TICs found: 2  Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 37.27 | 7.3 | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-003-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071912.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/19/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.6 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 17 | |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 14 | |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 5.2 | |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 1.9 | |
| 95-47-6 | o-Xylene | 2.4 | |
| 136777-61-2 | m/p-Xylenes | 5.9 | |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-GP-003-GW80**

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O02

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071912.D

Level: (low/med) ____  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/19/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)  Soil Aliquot Volume: ____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-003-GW80

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No. N5202    Site: 36 SYLVE    Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O02

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071912.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/19/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-003-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071913.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/19/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 12 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 15 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 43 | |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 44 | |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-003-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: 003

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071913.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/19/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-003-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071913.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/19/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

Concentration Units:
(ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-003-GW60

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES    Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O04

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071973.D

Level: (low/med) ____    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/21/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)    Soil Aliquot Volume: ____ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 34 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 68 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 180 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 320 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 33 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-003-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071973.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-003-GW60

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No. N5202    Site: 36 SYLVE    Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O04

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071973.D

Level: (low/med)    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/21/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: (uL)    Soil Aliquot Volume: (uL)

Number TICs found: 4

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 156-59-2 | Ethene, 1,2-dichloro-, (Z)- | 6.20 | 4.2 | J |
| 2. | Unknown | 6.22 | 3.8 | J |
| 3. | Column Bleed | 6.45 | 4.2 | J |
| 4. | Column Bleed | 37.30 | 13 | J |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-003-GW60D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O04DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071914.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 45 | D |
| 75-09-2 | Methylene Chloride | 3.5 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 63 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 210 | D |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 290 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 34 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-GP-003-GW60D**

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O04DL

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071914.D

Level: (low/med) ______  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/20/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 10.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-004-GW80

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O05

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071927.D

Level: (low/med) ____  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/20/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)  Soil Aliquot Volume: ____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 21 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 26 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 59 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 93 | |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 4.7 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-004-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071927.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
**096-GP-004-GW80**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071927.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-004-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O06

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071928.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 33 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 82 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 140 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 420 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 17 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-004-GW70

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES    Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O06

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071928.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/20/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
**096-GP-004-GW70**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O06

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071928.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 2

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Unknown | 8.44 | 5.1 | J |
| 2. | Unknown | 8.46 | 9.5 | J |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-004-GW70D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O06DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071954.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 44 | D |
| 75-09-2 | Methylene Chloride | 3.5 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 110 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 200 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 450 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 17 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-004-GW70D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O06DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071954.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-004-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: 007

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071929.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 130 | E |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 220 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 850 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 1100 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 37 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-004-GW60

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O07

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071929.D

Level: (low/med) ______  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/20/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-004-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O07

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071929.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-004-GW60D

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O07DL

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071922.D

Level: (low/med)    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/20/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 100.0

Soil Extract Volume: (uL)    Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 110 | UD |
| 75-01-4 | Vinyl Chloride | 100 | UD |
| 74-83-9 | Bromomethane | 61 | UD |
| 75-00-3 | Chloroethane | 74 | UD |
| 75-69-4 | Trichlorofluoromethane | 41 | UD |
| 75-35-4 | 1,1-Dichloroethene | 230 | D |
| 75-09-2 | Methylene Chloride | 35 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 45 | UD |
| 75-34-3 | 1,1-Dichloroethane | 320 | D |
| 67-66-3 | Chloroform | 26 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 4000 | BD |
| 56-23-5 | Carbon Tetrachloride | 30 | UD |
| 71-43-2 | Benzene | 27 | UD |
| 107-06-2 | 1,2-Dichloroethane | 32 | UD |
| 79-01-6 | Trichloroethene | 1300 | D |
| 78-87-5 | 1,2-Dichloropropane | 40 | UD |
| 75-27-4 | Bromodichloromethane | 29 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 110 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 23 | UD |
| 108-88-3 | Toluene | 26 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 30 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 34 | UD |
| 127-18-4 | Tetrachloroethene | 28 | UD |
| 124-48-1 | Dibromochloromethane | 28 | UD |
| 108-90-7 | Chlorobenzene | 25 | UD |
| 100-41-4 | Ethyl Benzene | 42 | UD |
| 95-47-6 | o-Xylene | 46 | UD |
| 136777-61-2 | m/p-Xylenes | 39 | UD |
| 75-25-2 | Bromoform | 35 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 26 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 39 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 30 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 22 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-GP-004-GW60D**

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O07DL

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071922.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/20/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 100.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 3200 | UD |
| 107-13-1 | Acrylonitrile | 310 | UD |
| | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

**096-GP-005-GW80**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O08

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071930.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 17 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 8.2 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 45 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 600 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 16 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-005-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O08

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071930.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

**096-GP-005-GW80**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O08

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071930.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-005-GW80D

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O08DL

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071923.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/20/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 20.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 22 | UD |
| 75-01-4 | Vinyl Chloride | 21 | UD |
| 74-83-9 | Bromomethane | 12 | UD |
| 75-00-3 | Chloroethane | 15 | UD |
| 75-69-4 | Trichlorofluoromethane | 8.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 8.4 | UD |
| 75-09-2 | Methylene Chloride | 7 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 8.9 | UD |
| 75-34-3 | 1,1-Dichloroethane | 4.5 | UD |
| 67-66-3 | Chloroform | 5.1 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 170 | BD |
| 56-23-5 | Carbon Tetrachloride | 6 | UD |
| 71-43-2 | Benzene | 5.4 | UD |
| 107-06-2 | 1,2-Dichloroethane | 6.4 | UD |
| 79-01-6 | Trichloroethene | 730 | D |
| 78-87-5 | 1,2-Dichloropropane | 8 | UD |
| 75-27-4 | Bromodichloromethane | 5.7 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 22 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 4.6 | UD |
| 108-88-3 | Toluene | 5.1 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 6 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 6.8 | UD |
| 127-18-4 | Tetrachloroethene | 5.5 | UD |
| 124-48-1 | Dibromochloromethane | 5.6 | UD |
| 108-90-7 | Chlorobenzene | 4.9 | UD |
| 100-41-4 | Ethyl Benzene | 8.4 | UD |
| 95-47-6 | o-Xylene | 9.2 | UD |
| 136777-61-2 | m/p-Xylenes | 7.8 | UD |
| 75-25-2 | Bromoform | 7 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.1 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 7.7 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 6.1 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 4.4 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-005-GW80D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O08DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071923.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 20.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 650 | UD |
| 107-13-1 | Acrylonitrile | 62 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-005-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O09

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071931.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 53 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 76 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 200 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 960 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 41 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-005-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O09

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071931.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-005-GW70

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No. N5202  Site: 36 SYLVE  Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O09

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071931.D

Level: (low/med)  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/20/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

Number TICs found: 0  Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-005-GW70D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O09DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071925.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 50.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 55 | UD |
| 75-01-4 | Vinyl Chloride | 52 | UD |
| 74-83-9 | Bromomethane | 31 | UD |
| 75-00-3 | Chloroethane | 37 | UD |
| 75-69-4 | Trichlorofluoromethane | 20 | UD |
| 75-35-4 | 1,1-Dichloroethene | 21 | UD |
| 75-09-2 | Methylene Chloride | 18 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 22 | UD |
| 75-34-3 | 1,1-Dichloroethane | 11 | UD |
| 67-66-3 | Chloroform | 13 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 460 | BD |
| 56-23-5 | Carbon Tetrachloride | 15 | UD |
| 71-43-2 | Benzene | 14 | UD |
| 107-06-2 | 1,2-Dichloroethane | 16 | UD |
| 79-01-6 | Trichloroethene | 1100 | D |
| 78-87-5 | 1,2-Dichloropropane | 20 | UD |
| 75-27-4 | Bromodichloromethane | 14 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 56 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 12 | UD |
| 108-88-3 | Toluene | 13 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 15 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 17 | UD |
| 127-18-4 | Tetrachloroethene | 14 | UD |
| 124-48-1 | Dibromochloromethane | 14 | UD |
| 108-90-7 | Chlorobenzene | 12 | UD |
| 100-41-4 | Ethyl Benzene | 21 | UD |
| 95-47-6 | o-Xylene | 23 | UD |
| 136777-61-2 | m/p-Xylenes | 20 | UD |
| 75-25-2 | Bromoform | 17 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 13 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 19 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 15 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 11 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-005-GW70D

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O09DL

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071925.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/20/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 50.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 1600 | UD |
| 107-13-1 | Acrylonitrile | 150 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-005-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O10

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071937.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 200 | E |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 570 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 940 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 240 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 13 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-005-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O10

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071937.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
**096-GP-005-GW60**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O10

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071937.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-005-GW60D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O10DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071955.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 20.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 22 | UD |
| 75-01-4 | Vinyl Chloride | 21 | UD |
| 74-83-9 | Bromomethane | 12 | UD |
| 75-00-3 | Chloroethane | 15 | UD |
| 75-69-4 | Trichlorofluoromethane | 8.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 270 | D |
| 75-09-2 | Methylene Chloride | 7 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 8.9 | UD |
| 75-34-3 | 1,1-Dichloroethane | 670 | D |
| 67-66-3 | Chloroform | 5.1 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 960 | BD |
| 56-23-5 | Carbon Tetrachloride | 6 | UD |
| 71-43-2 | Benzene | 5.4 | UD |
| 107-06-2 | 1,2-Dichloroethane | 6.4 | UD |
| 79-01-6 | Trichloroethene | 320 | D |
| 78-87-5 | 1,2-Dichloropropane | 8 | UD |
| 75-27-4 | Bromodichloromethane | 5.7 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 22 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 4.6 | UD |
| 108-88-3 | Toluene | 5.1 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 6 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 6.8 | UD |
| 127-18-4 | Tetrachloroethene | 5.5 | UD |
| 124-48-1 | Dibromochloromethane | 5.6 | UD |
| 108-90-7 | Chlorobenzene | 4.9 | UD |
| 100-41-4 | Ethyl Benzene | 8.4 | UD |
| 95-47-6 | o-Xylene | 9.2 | UD |
| 136777-61-2 | m/p-Xylenes | 7.8 | UD |
| 75-25-2 | Bromoform | 7 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.1 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 7.7 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 6.1 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 4.4 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-005-GW60D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O10DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071955.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 20.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 650 | UD |
| 107-13-1 | Acrylonitrile | 62 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-006-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O11

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071938.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 42 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 37 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 140 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 450 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 14 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-006-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O11

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071938.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
**096-GP-006-GW80**

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No. N5202    Site: 36 SYLVE  Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O11

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071938.D

Level: (low/med)    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/20/01

GC Column: DB624  ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: (uL)    Soil Aliquot Volume: (uL)

Concentration Units:
Number TICs found: 0    (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-006-GW80D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O11DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071956.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 47 | D |
| 75-09-2 | Methylene Chloride | 3.5 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 53 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 210 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 450 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 14 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-006-GW80D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O11DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071956.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-006-GW70

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O12

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071939.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/20/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 52 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 47 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 230 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 610 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 42 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-006-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O12

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071939.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-006-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O12

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071939.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 156-59-2 | Ethene, 1,2-dichloro-, (Z)- | 6.22 | 31 | J |
| 2. | Unknown | 6.24 | 11 | J |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-006-GW70D

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O12DL

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071957.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/21/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 10.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 66 | D |
| 75-09-2 | Methylene Chloride | 3.5 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 66 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 290 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 610 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 46 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-006-GW70D

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O12DL

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071957.D

Level: (low/med) ______  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/21/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 10.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration Units | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 096-GP-006-GW60

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES  Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O13

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071940.D

Level: (low/med) ____  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/20/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)  Soil Aliquot Volume: ____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 550 | E |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 580 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1900 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 360 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 38 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-006-GW60

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O13

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071940.D

Level: (low/med)    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/20/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: (uL)    Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
**096-GP-006-GW60**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O13

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071940.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-006-GW60D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O13DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071958.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 20.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 22 | UD |
| 75-01-4 | Vinyl Chloride | 21 | UD |
| 74-83-9 | Bromomethane | 12 | UD |
| 75-00-3 | Chloroethane | 15 | UD |
| 75-69-4 | Trichlorofluoromethane | 8.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 700 | D |
| 75-09-2 | Methylene Chloride | 7 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 8.9 | UD |
| 75-34-3 | 1,1-Dichloroethane | 670 | D |
| 67-66-3 | Chloroform | 5.1 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 3300 | E |
| 56-23-5 | Carbon Tetrachloride | 6 | UD |
| 71-43-2 | Benzene | 5.4 | UD |
| 107-06-2 | 1,2-Dichloroethane | 6.4 | UD |
| 79-01-6 | Trichloroethene | 430 | D |
| 78-87-5 | 1,2-Dichloropropane | 8 | UD |
| 75-27-4 | Bromodichloromethane | 5.7 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 22 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 4.6 | UD |
| 108-88-3 | Toluene | 5.1 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 6 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 6.8 | UD |
| 127-18-4 | Tetrachloroethene | 5.5 | UD |
| 124-48-1 | Dibromochloromethane | 5.6 | UD |
| 108-90-7 | Chlorobenzene | 4.9 | UD |
| 100-41-4 | Ethyl Benzene | 8.4 | UD |
| 95-47-6 | o-Xylene | 9.2 | UD |
| 136777-61-2 | m/p-Xylenes | 7.8 | UD |
| 75-25-2 | Bromoform | 7 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.1 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 7.7 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 6.1 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 4.4 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-GP-006-GW60D**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O13DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071958.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 20.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 650 | UD |
| 107-13-1 | Acrylonitrile | 62 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-006-GW60DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O13DL1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071974.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 100.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 110 | UD |
| 75-01-4 | Vinyl Chloride | 100 | UD |
| 74-83-9 | Bromomethane | 61 | UD |
| 75-00-3 | Chloroethane | 74 | UD |
| 75-69-4 | Trichlorofluoromethane | 41 | UD |
| 75-35-4 | 1,1-Dichloroethene | 750 | D |
| 75-09-2 | Methylene Chloride | 35 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 45 | UD |
| 75-34-3 | 1,1-Dichloroethane | 1100 | D |
| 67-66-3 | Chloroform | 26 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 3900 | D |
| 56-23-5 | Carbon Tetrachloride | 30 | UD |
| 71-43-2 | Benzene | 27 | UD |
| 107-06-2 | 1,2-Dichloroethane | 32 | UD |
| 79-01-6 | Trichloroethene | 330 | D |
| 78-87-5 | 1,2-Dichloropropane | 40 | UD |
| 75-27-4 | Bromodichloromethane | 29 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 110 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 23 | UD |
| 108-88-3 | Toluene | 26 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 30 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 34 | UD |
| 127-18-4 | Tetrachloroethene | 28 | UD |
| 124-48-1 | Dibromochloromethane | 28 | UD |
| 108-90-7 | Chlorobenzene | 25 | UD |
| 100-41-4 | Ethyl Benzene | 42 | UD |
| 95-47-6 | o-Xylene | 46 | UD |
| 136777-61-2 | m/p-Xylenes | 39 | UD |
| 75-25-2 | Bromoform | 35 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 26 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 39 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 30 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 22 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-006-GW60DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O13DL1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071974.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 100.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 3200 | UD |
| 107-13-1 | Acrylonitrile | 310 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-FLDBLK-7/10/0

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O14

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071936.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/20/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.4 | U |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 0.3 | U |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 0.4 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-FLDBLK-7/10/0**

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O14

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071936.D

Level: (low/med) ______  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/20/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-FLDBLK-7/10/0

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O14

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071936.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 1

Concentration Units:
(ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 37.44 | 6.3 | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-007-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O15

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071941.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 77 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 68 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 290 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 1200 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 72 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-007-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O15

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071941.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-GP-007-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O15

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071941.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

Concentration Units:
(ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-007-GW80DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O15DL1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071969.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 100 | D |
| 75-09-2 | Methylene Chloride | 3.5 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 75 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 350 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 1300 | E |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 87 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-GP-007-GW80DL**

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O15DL1

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071969.D

Level: (low/med) ____  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/21/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 10.0

Soil Extract Volume: ____ (uL)  Soil Aliquot Volume: ____ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-007-GW80D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O15DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071960.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 50.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 55 | UD |
| 75-01-4 | Vinyl Chloride | 52 | UD |
| 74-83-9 | Bromomethane | 31 | UD |
| 75-00-3 | Chloroethane | 37 | UD |
| 75-69-4 | Trichlorofluoromethane | 20 | UD |
| 75-35-4 | 1,1-Dichloroethene | 95 | D |
| 75-09-2 | Methylene Chloride | 18 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 22 | UD |
| 75-34-3 | 1,1-Dichloroethane | 11 | UD |
| 67-66-3 | Chloroform | 13 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 540 | BD |
| 56-23-5 | Carbon Tetrachloride | 15 | UD |
| 71-43-2 | Benzene | 14 | UD |
| 107-06-2 | 1,2-Dichloroethane | 16 | UD |
| 79-01-6 | Trichloroethene | 1200 | D |
| 78-87-5 | 1,2-Dichloropropane | 20 | UD |
| 75-27-4 | Bromodichloromethane | 14 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 56 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 12 | UD |
| 108-88-3 | Toluene | 13 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 15 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 17 | UD |
| 127-18-4 | Tetrachloroethene | 80 | D |
| 124-48-1 | Dibromochloromethane | 14 | UD |
| 108-90-7 | Chlorobenzene | 12 | UD |
| 100-41-4 | Ethyl Benzene | 21 | UD |
| 95-47-6 | o-Xylene | 23 | UD |
| 136777-61-2 | m/p-Xylenes | 20 | UD |
| 75-25-2 | Bromoform | 17 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 13 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 19 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 15 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 11 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-007-GW80D

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O15DL

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071960.D

Level: (low/med)  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/21/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 50.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 1600 | UD |
| 107-13-1 | Acrylonitrile | 150 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-007-GW70

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O16

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071942.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/20/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 82 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 54 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 280 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 870 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 50 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-007-GW70

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES  Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O16

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071942.D

Level: (low/med) ______  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/20/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
**096-GP-007-GW70**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: 016

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071942.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-GP-007-GW70D**

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O16DL

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071961.D

Level: (low/med) ____  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/21/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 20.0

Soil Extract Volume: ____ (uL)  Soil Aliquot Volume: ____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 22 | UD |
| 75-01-4 | Vinyl Chloride | 21 | UD |
| 74-83-9 | Bromomethane | 12 | UD |
| 75-00-3 | Chloroethane | 15 | UD |
| 75-69-4 | Trichlorofluoromethane | 8.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 94 | D |
| 75-09-2 | Methylene Chloride | 7 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 8.9 | UD |
| 75-34-3 | 1,1-Dichloroethane | 77 | D |
| 67-66-3 | Chloroform | 5.1 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 390 | BD |
| 56-23-5 | Carbon Tetrachloride | 6 | UD |
| 71-43-2 | Benzene | 5.4 | UD |
| 107-06-2 | 1,2-Dichloroethane | 6.4 | UD |
| 79-01-6 | Trichloroethene | 820 | D |
| 78-87-5 | 1,2-Dichloropropane | 8 | UD |
| 75-27-4 | Bromodichloromethane | 5.7 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 22 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 4.6 | UD |
| 108-88-3 | Toluene | 5.1 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 6 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 6.8 | UD |
| 127-18-4 | Tetrachloroethene | 48 | D |
| 124-48-1 | Dibromochloromethane | 5.6 | UD |
| 108-90-7 | Chlorobenzene | 4.9 | UD |
| 100-41-4 | Ethyl Benzene | 8.4 | UD |
| 95-47-6 | o-Xylene | 9.2 | UD |
| 136777-61-2 | m/p-Xylenes | 7.8 | UD |
| 75-25-2 | Bromoform | 7 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.1 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 7.7 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 6.1 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 4.4 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-007-GW70D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O16DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071961.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 20.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 650 | UD |
| 107-13-1 | Acrylonitrile | 62 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-GP-007-GW60**

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O17

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071943.D

Level: (low/med) ____    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/20/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)    Soil Aliquot Volume: ____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 600 | E |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 930 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 2500 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 310 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 32 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-007-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O17

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071943.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
**096-GP-007-GW60**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O17

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071943.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

Concentration Units:
(ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-007-GW60D

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O17DL

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071959.D

Level: (low/med) ______  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/21/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 20.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 22 | UD |
| 75-01-4 | Vinyl Chloride | 21 | UD |
| 74-83-9 | Bromomethane | 12 | UD |
| 75-00-3 | Chloroethane | 15 | UD |
| 75-69-4 | Trichlorofluoromethane | 8.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 680 | D |
| 75-09-2 | Methylene Chloride | 7 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 8.9 | UD |
| 75-34-3 | 1,1-Dichloroethane | 910 | D |
| 67-66-3 | Chloroform | 5.1 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 3800 | E |
| 56-23-5 | Carbon Tetrachloride | 6 | UD |
| 71-43-2 | Benzene | 5.4 | UD |
| 107-06-2 | 1,2-Dichloroethane | 6.4 | UD |
| 79-01-6 | Trichloroethene | 340 | D |
| 78-87-5 | 1,2-Dichloropropane | 8 | UD |
| 75-27-4 | Bromodichloromethane | 5.7 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 22 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 4.6 | UD |
| 108-88-3 | Toluene | 5.1 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 6 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 6.8 | UD |
| 127-18-4 | Tetrachloroethene | 5.5 | UD |
| 124-48-1 | Dibromochloromethane | 5.6 | UD |
| 108-90-7 | Chlorobenzene | 4.9 | UD |
| 100-41-4 | Ethyl Benzene | 8.4 | UD |
| 95-47-6 | o-Xylene | 9.2 | UD |
| 136777-61-2 | m/p-Xylenes | 7.8 | UD |
| 75-25-2 | Bromoform | 7 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.1 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 7.7 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 6.1 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 4.4 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-007-GW60D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O17DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071959.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 20.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 650 | UD |
| 107-13-1 | Acrylonitrile | 62 | UD |

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

096-GP-007-GW60DL

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O17DL1

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071975.D

Level: (low/med)  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/21/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 100.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 110 | UD |
| 75-01-4 | Vinyl Chloride | 100 | UD |
| 74-83-9 | Bromomethane | 61 | UD |
| 75-00-3 | Chloroethane | 74 | UD |
| 75-69-4 | Trichlorofluoromethane | 41 | UD |
| 75-35-4 | 1,1-Dichloroethene | 650 | D |
| 75-09-2 | Methylene Chloride | 35 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 45 | UD |
| 75-34-3 | 1,1-Dichloroethane | 550 | D |
| 67-66-3 | Chloroform | 26 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 3400 | D |
| 56-23-5 | Carbon Tetrachloride | 30 | UD |
| 71-43-2 | Benzene | 27 | UD |
| 107-06-2 | 1,2-Dichloroethane | 32 | UD |
| 79-01-6 | Trichloroethene | 270 | D |
| 78-87-5 | 1,2-Dichloropropane | 40 | UD |
| 75-27-4 | Bromodichloromethane | 29 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 110 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 23 | UD |
| 108-88-3 | Toluene | 26 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 30 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 34 | UD |
| 127-18-4 | Tetrachloroethene | 28 | UD |
| 124-48-1 | Dibromochloromethane | 28 | UD |
| 108-90-7 | Chlorobenzene | 25 | UD |
| 100-41-4 | Ethyl Benzene | 42 | UD |
| 95-47-6 | o-Xylene | 46 | UD |
| 136777-61-2 | m/p-Xylenes | 39 | UD |
| 75-25-2 | Bromoform | 35 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 26 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 39 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 30 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 22 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-007-GW60DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O17DL1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071975.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 100.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 3200 | UD |
| 107-13-1 | Acrylonitrile | 310 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-008-GW80

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O18

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071944.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/20/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 78 | |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 62 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 240 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 1300 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 60 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-008-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O18

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071944.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-008-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O18

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071944.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/20/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-008-GW80DL

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O18DL1

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071970.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/21/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 10.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 85 | D |
| 75-09-2 | Methylene Chloride | 3.5 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 69 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 310 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 1400 | E |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 64 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-008-GW80DL

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O18DL1

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071970.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/21/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 10.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-008-GW80D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O18DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071966.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 50.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 55 | UD |
| 75-01-4 | Vinyl Chloride | 52 | UD |
| 74-83-9 | Bromomethane | 31 | UD |
| 75-00-3 | Chloroethane | 37 | UD |
| 75-69-4 | Trichlorofluoromethane | 20 | UD |
| 75-35-4 | 1,1-Dichloroethene | 78 | D |
| 75-09-2 | Methylene Chloride | 18 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 22 | UD |
| 75-34-3 | 1,1-Dichloroethane | 11 | UD |
| 67-66-3 | Chloroform | 13 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 470 | BD |
| 56-23-5 | Carbon Tetrachloride | 15 | UD |
| 71-43-2 | Benzene | 14 | UD |
| 107-06-2 | 1,2-Dichloroethane | 16 | UD |
| 79-01-6 | Trichloroethene | 1300 | D |
| 78-87-5 | 1,2-Dichloropropane | 20 | UD |
| 75-27-4 | Bromodichloromethane | 14 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 56 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 12 | UD |
| 108-88-3 | Toluene | 13 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 15 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 17 | UD |
| 127-18-4 | Tetrachloroethene | 56 | D |
| 124-48-1 | Dibromochloromethane | 14 | UD |
| 108-90-7 | Chlorobenzene | 12 | UD |
| 100-41-4 | Ethyl Benzene | 21 | UD |
| 95-47-6 | o-Xylene | 23 | UD |
| 136777-61-2 | m/p-Xylenes | 20 | UD |
| 75-25-2 | Bromoform | 17 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 13 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 19 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 15 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 11 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-008-GW80D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O18DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071966.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 50.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 1600 | UD |
| 107-13-1 | Acrylonitrile | 150 | UD |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-GP-008-GW70**

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES    Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O19

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071945.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/21/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 380 | E |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 450 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1900 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 660 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 44 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-008-GW70

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES    Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O19

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071945.D

Level: (low/med)    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/21/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: (uL)    Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

**096-GP-008-GW70**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O19

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071945.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-008-GW70DL

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O19DL1

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071971.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/21/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 10.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 440 | D |
| 75-09-2 | Methylene Chloride | 3.5 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 520 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 2700 | E |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 780 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 54 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-008-GW70DL

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O19DL1

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071971.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/21/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 10.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-008-GW70D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O19DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071967.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 50.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 55 | UD |
| 75-01-4 | Vinyl Chloride | 52 | UD |
| 74-83-9 | Bromomethane | 31 | UD |
| 75-00-3 | Chloroethane | 37 | UD |
| 75-69-4 | Trichlorofluoromethane | 20 | UD |
| 75-35-4 | 1,1-Dichloroethene | 450 | D |
| 75-09-2 | Methylene Chloride | 18 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 22 | UD |
| 75-34-3 | 1,1-Dichloroethane | 430 | D |
| 67-66-3 | Chloroform | 13 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 2600 | BD |
| 56-23-5 | Carbon Tetrachloride | 15 | UD |
| 71-43-2 | Benzene | 14 | UD |
| 107-06-2 | 1,2-Dichloroethane | 16 | UD |
| 79-01-6 | Trichloroethene | 710 | D |
| 78-87-5 | 1,2-Dichloropropane | 20 | UD |
| 75-27-4 | Bromodichloromethane | 14 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 56 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 12 | UD |
| 108-88-3 | Toluene | 13 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 15 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 17 | UD |
| 127-18-4 | Tetrachloroethene | 14 | UD |
| 124-48-1 | Dibromochloromethane | 14 | UD |
| 108-90-7 | Chlorobenzene | 12 | UD |
| 100-41-4 | Ethyl Benzene | 21 | UD |
| 95-47-6 | o-Xylene | 23 | UD |
| 136777-61-2 | m/p-Xylenes | 20 | UD |
| 75-25-2 | Bromoform | 17 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 13 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 19 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 15 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 11 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-008-GW70D

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES  Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O19DL

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071967.D

Level: (low/med)  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/21/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 50.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 1600 | UD |
| 107-13-1 | Acrylonitrile | 150 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-008-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O20

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071946.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 290 | E |
| 75-09-2 | Methylene Chloride | 0.4 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 420 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1500 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 410 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 21 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-008-GW60

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O20

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071946.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/21/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-GP-008-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5202 Site: 36 SYLVE Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O20

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071946.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-008-GW60DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O20DL1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071972.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 270 | D |
| 75-09-2 | Methylene Chloride | 3.5 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 420 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 1700 | E |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 400 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 21 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-008-GW60DL

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5202    Site: 36 SYLVES Location: LB15287    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O20DL1

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VE071972.D

Level: (low/med)    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/21/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 10.0

Soil Extract Volume: (uL)    Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-008-GW60D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5202 Site: 36 SYLVES Location: LB15287 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O20DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE071968.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/21/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 50.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 55 | UD |
| 75-01-4 | Vinyl Chloride | 52 | UD |
| 74-83-9 | Bromomethane | 31 | UD |
| 75-00-3 | Chloroethane | 37 | UD |
| 75-69-4 | Trichlorofluoromethane | 20 | UD |
| 75-35-4 | 1,1-Dichloroethene | 270 | D |
| 75-09-2 | Methylene Chloride | 18 | UD |
| 156-60-5 | trans-1,2-Dichloroethene | 22 | UD |
| 75-34-3 | 1,1-Dichloroethane | 440 | D |
| 67-66-3 | Chloroform | 13 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 1800 | BD |
| 56-23-5 | Carbon Tetrachloride | 15 | UD |
| 71-43-2 | Benzene | 14 | UD |
| 107-06-2 | 1,2-Dichloroethane | 16 | UD |
| 79-01-6 | Trichloroethene | 380 | D |
| 78-87-5 | 1,2-Dichloropropane | 20 | UD |
| 75-27-4 | Bromodichloromethane | 14 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 56 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 12 | UD |
| 108-88-3 | Toluene | 13 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 15 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 17 | UD |
| 127-18-4 | Tetrachloroethene | 14 | UD |
| 124-48-1 | Dibromochloromethane | 14 | UD |
| 108-90-7 | Chlorobenzene | 12 | UD |
| 100-41-4 | Ethyl Benzene | 21 | UD |
| 95-47-6 | o-Xylene | 23 | UD |
| 136777-61-2 | m/p-Xylenes | 20 | UD |
| 75-25-2 | Bromoform | 17 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 13 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 19 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 15 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 11 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 096-GP-008-GW60D

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5202  Site: 36 SYLVES Location: LB15287  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O20DL

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VE071968.D

Level: (low/med) ____  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/21/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 50.0

Soil Extract Volume: ____ (uL)  Soil Aliquot Volume: ____ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 1600 | UD |
| 107-13-1 | Acrylonitrile | 150 | UD |

CHEMTECH 284 Sheffield Street • Mountainside, NJ 07092 Phone: 908.789.8900 Fax: 908.789.8922

# DATA PACKAGE FOR RESULTS SUMMARY



PROJECT NAME: 36 SYLVESTER STREET SITE
PROJECT # 00-096

IMPACT ENVIRONMENTAL
1 VILLAGE PLAZA
KINGS PARK, NY 11754
631-269-8800

| | |
|---|---|
| CHEMTECH PROJECT | N5203ASP |
| ATTENTION | KEVIN KLEAKA |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-009-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072315.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 170 | E |
| 75-09-2 | Methylene Chloride | 9.7 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 140 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 440 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 700 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 2.7 | |
| 127-18-4 | Tetrachloroethene | 66 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-009-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072315.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-009-GW80

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No. N5203  Site: 36 SYLVE  Location: LB15285  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O01

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072315.D

Level: (low/med) ____  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/23/01

GC Column: RTX624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)  Soil Aliquot Volume: ____ (uL)

Number TICs found: 1

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.40 | 5.6 | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-009-GW80D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O01DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072406.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 25.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 28 | UD |
| 75-01-4 | Vinyl Chloride | 26 | UD |
| 74-83-9 | Bromomethane | 15 | UD |
| 75-00-3 | Chloroethane | 19 | UD |
| 75-69-4 | Trichlorofluoromethane | 10 | UD |
| 75-35-4 | 1,1-Dichloroethene | 250 | D |
| 75-09-2 | Methylene Chloride | 170 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 11 | UD |
| 75-34-3 | 1,1-Dichloroethane | 210 | D |
| 67-66-3 | Chloroform | 6.4 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 790 | BD |
| 56-23-5 | Carbon Tetrachloride | 7.6 | UD |
| 71-43-2 | Benzene | 6.8 | UD |
| 107-06-2. | 1,2-Dichloroethane | 8 | UD |
| 79-01-6 | Trichloroethene | 1600 | D |
| 78-87-5 | 1,2-Dichloropropane | 10 | UD |
| 75-27-4 | Bromodichloromethane | 7.1 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 28 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 5.8 | UD |
| 108-88-3 | Toluene | 6.4 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 7.5 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 8.5 | UD |
| 127-18-4 | Tetrachloroethene | 95 | D |
| 124-48-1 | Dibromochloromethane | 7 | UD |
| 108-90-7 | Chlorobenzene | 6.2 | UD |
| 100-41-4 | Ethyl Benzene | 11 | UD |
| 95-47-6 | o-Xylene | 11 | UD |
| 136777-61-2 | m/p-Xylenes | 9.8 | UD |
| 75-25-2 | Bromoform | 8.7 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 6.4 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 9.7 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 7.6 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 5.5 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-009-GW80D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O01DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072406.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 25.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 810 | UD |
| 107-13-1 | Acrylonitrile | 77 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-009-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: 002

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072316.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 12 | |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 400 | E |
| 75-09-2 | Methylene Chloride | 11 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 400 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 710 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 500 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 48 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-009-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072316.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |



FORM I VOA 3/90

GMEI-00758

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-GP-009-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072316.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 1

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 71-55-6 | Ethane, 1,1,1-trichloro- | 11.51 | 15 | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-009-GW70D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O02DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072407.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 50.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 55 | UD |
| 75-01-4 | Vinyl Chloride | 52 | UD |
| 74-83-9 | Bromomethane | 31 | UD |
| 75-00-3 | Chloroethane | 37 | UD |
| 75-69-4 | Trichlorofluoromethane | 20 | UD |
| 75-35-4 | 1,1-Dichloroethene | 1100 | D |
| 75-09-2 | Methylene Chloride | 520 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 22 | UD |
| 75-34-3 | 1,1-Dichloroethane | 960 | D |
| 67-66-3 | Chloroform | 13 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 4600 | BD |
| 56-23-5 | Carbon Tetrachloride | 15 | UD |
| 71-43-2 | Benzene | 14 | UD |
| 107-06-2 | 1,2-Dichloroethane | 16 | UD |
| 79-01-6 | Trichloroethene | 1300 | D |
| 78-87-5 | 1,2-Dichloropropane | 20 | UD |
| 75-27-4 | Bromodichloromethane | 14 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 56 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 12 | UD |
| 108-88-3 | Toluene | 13 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 15 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 17 | UD |
| 127-18-4 | Tetrachloroethene | 120 | D |
| 124-48-1 | Dibromochloromethane | 14 | UD |
| 108-90-7 | Chlorobenzene | 12 | UD |
| 100-41-4 | Ethyl Benzene | 21 | UD |
| 95-47-6 | o-Xylene | 23 | UD |
| 136777-61-2 | m/p-Xylenes | 20 | UD |
| 75-25-2 | Bromoform | 17 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 13 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 19 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 15 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 11 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-009-GW70D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O02DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072407.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 50.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 1600 | UD |
| 107-13-1 | Acrylonitrile | 150 | UD |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-009-GW60

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5203    Site: 36 SYLVES Location: LB15285    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O03

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072317.D

Level: (low/med) ____    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/23/01

GC Column: RTX624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)    Soil Aliquot Volume: ____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 13 | |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 390 | E |
| 75-09-2 | Methylene Chloride | 12 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 480 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 770 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 380 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 34 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-009-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072317.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-GP-009-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072317.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 1

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 26073-26-7 | Propanoyl chloride, 2,2-dich | 11.51 | 15 | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-009-GW60D

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5203  Site: 36 SYLVES Location: LB15285  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O03DL

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072408.D

Level: (low/med) ____  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/24/01

GC Column: RTX624  ID: 0.53 (mm)  Dilution Factor: 50.0

Soil Extract Volume: ____ (uL)  Soil Aliquot Volume: ____ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 55 | UD |
| 75-01-4 | Vinyl Chloride | 52 | UD |
| 74-83-9 | Bromomethane | 31 | UD |
| 75-00-3 | Chloroethane | 37 | UD |
| 75-69-4 | Trichlorofluoromethane | 20 | UD |
| 75-35-4 | 1,1-Dichloroethene | 730 | D |
| 75-09-2 | Methylene Chloride | 320 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 22 | UD |
| 75-34-3 | 1,1-Dichloroethane | 740 | D |
| 67-66-3 | Chloroform | 13 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 2900 | BD |
| 56-23-5 | Carbon Tetrachloride | 15 | UD |
| 71-43-2 | Benzene | 14 | UD |
| 107-06-2 | 1,2-Dichloroethane | 16 | UD |
| 79-01-6 | Trichloroethene | 530 | D |
| 78-87-5 | 1,2-Dichloropropane | 20 | UD |
| 75-27-4 | Bromodichloromethane | 14 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 56 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 12 | UD |
| 108-88-3 | Toluene | 13 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 15 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 17 | UD |
| 127-18-4 | Tetrachloroethene | 14 | UD |
| 124-48-1 | Dibromochloromethane | 14 | UD |
| 108-90-7 | Chlorobenzene | 12 | UD |
| 100-41-4 | Ethyl Benzene | 21 | UD |
| 95-47-6 | o-Xylene | 23 | UD |
| 136777-61-2 | m/p-Xylenes | 20 | UD |
| 75-25-2 | Bromoform | 17 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 13 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 19 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 15 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 11 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-009-GW60D

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5203  Site: 36 SYLVES Location: LB15285  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O03DL

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072408.D

Level: (low/med) ______  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/24/01

GC Column: RTX624  ID: 0.53 (mm)  Dilution Factor: 50.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 1600 | UD |
| 107-13-1 | Acrylonitrile | 150 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-010-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072318.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 77 | |
| 75-09-2 | Methylene Chloride | 9.9 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 130 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 250 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 13 | |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 2.4 | |
| 127-18-4 | Tetrachloroethene | 15 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-010-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072318.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-010-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072318.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 1 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.40 | 100 | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 096-GP-010-GW80D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O04DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072409.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 140 | D |
| 75-09-2 | Methylene Chloride | 70 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 160 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 330 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 18 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 18 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-010-GW80D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O04DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072409.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |



FORM I VOA 3/90

GMEI-00771

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-010-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072319.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 92 | |
| 75-09-2 | Methylene Chloride | 9.4 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 170 | E |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 260 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 120 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 3.3 | |
| 127-18-4 | Tetrachloroethene | 18 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-010-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072319.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-GP-010-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: 005

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072319.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 4 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.40 | 76 | J |
| 2. 4412-91-3 | 3-Furanmethanol | 3.59 | 21 | J |
| 3. 115-11-7 | 1-Propene, 2-methyl- | 4.25 | 11 | J |
| 4. 106-98-9 | 1-Butene | 4.28 | 7.8 | J |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-010-GW70D

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5203  Site: 36 SYLVES Location: LB15285  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O05DL

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072410.D

Level: (low/med)  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/24/01

GC Column: RTX624  ID: 0.53 (mm)  Dilution Factor: 10.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 120 | D |
| 75-09-2 | Methylene Chloride | 66 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 220 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 390 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 170 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 23 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-010-GW70D

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O05DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072410.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-010-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: 006

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072326.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 5.5 | U |
| 75-01-4 | Vinyl Chloride | 5.2 | U |
| 74-83-9 | Bromomethane | 3.1 | U |
| 75-00-3 | Chloroethane | 3.7 | U |
| 75-69-4 | Trichlorofluoromethane | 2 | U |
| 75-35-4 | 1,1-Dichloroethene | 130 | |
| 75-09-2 | Methylene Chloride | 43 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 2.2 | U |
| 75-34-3 | 1,1-Dichloroethane | 340 | |
| 67-66-3 | Chloroform | 1.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 110 | B |
| 56-23-5 | Carbon Tetrachloride | 1.5 | U |
| 71-43-2 | Benzene | 1.4 | U |
| 107-06-2 | 1,2-Dichloroethane | 1.6 | U |
| 79-01-6 | Trichloroethene | 150 | |
| 78-87-5 | 1,2-Dichloropropane | 2 | U |
| 75-27-4 | Bromodichloromethane | 1.4 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 5.6 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 1.2 | U |
| 108-88-3 | Toluene | 1.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.5 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1.7 | U |
| 127-18-4 | Tetrachloroethene | 21 | |
| 124-48-1 | Dibromochloromethane | 1.4 | U |
| 108-90-7 | Chlorobenzene | 1.2 | U |
| 100-41-4 | Ethyl Benzene | 2.1 | U |
| 95-47-6 | o-Xylene | 2.3 | U |
| 136777-61-2 | m/p-Xylenes | 2 | U |
| 75-25-2 | Bromoform | 1.7 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1.9 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1.5 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1.1 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-010-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O06

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072326.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 160 | U |
| 107-13-1 | Acrylonitrile | 15 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-010-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O06

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072326.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 6

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.29 | 270 | J |
| 2. 115-07-1 | Propene | 3.59 | 47 | J |
| 3. 106-98-9 | 1-Butene | 4.25 | 49 | J |
| 4. 106-98-9 | 1-Butene | 4.25 | 24 | J |
| 5. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 6.79 | 34 | J |
| 6. 79-00-5 | Ethane, 1,1,2-trichloro- | 17.49 | 29 | J |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-FLDBLK-7/11/01

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5203  Site: 36 SYLVES Location: LB15285  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O07

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072314.D

Level: (low/med) ______  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/23/01

GC Column: RTX624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.4 | U |
| 75-09-2 | Methylene Chloride | 11 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1.9 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 0.4 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-FLDBLK-7/11/01

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O07

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072314.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.4 | U |
| 75-09-2 | Methylene Chloride | 11 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1.9 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 0.4 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-FLDBLK-7/11/0

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O07

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072314.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |



FORM I VOA 3/90

GMEI-00782

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-FLDBLK-7/11/01

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O07

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072314.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 2 Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.31 | 73 | J |
| 2. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 6.82 | 14 | J |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-011-GW80

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5203  Site: 36 SYLVES Location: LB15285  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O08

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072320.D

Level: (low/med) ______  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/23/01

GC Column: RTX624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 14 | |
| 75-09-2 | Methylene Chloride | 8.9 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 21 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 55 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 4.8 | |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 4 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-011-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O08

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072320.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-011-GW80

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No. N5203    Site: 36 SYLVE    Location: LB15285    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O08

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072320.D

Level: (low/med)    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/23/01

GC Column: RTX624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: (uL)    Soil Aliquot Volume: (uL)

Number TICs found: 5

Concentration Units:
(ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.40 | 97 | J |
| 2. 5157-08-4 | 3(2H)-Pyridazinone, 4,5-dihy | 3.59 | 14 | J |
| 3. 115-11-7 | 1-Propene, 2-methyl- | 4.25 | 7.2 | J |
| 4. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 6.79 | 9.6 | J |
| 5. 41902-42-5 | 3-Pentanol, 3-(1,1-dimethyle | 24.92 | 5.6 | J |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-011-GW70

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5203    Site: 36 SYLVES Location: LB15285    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O09

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072321.D

Level: (low/med) ____    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/23/01

GC Column: RTX624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)    Soil Aliquot Volume: ____ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 13 | |
| 75-09-2 | Methylene Chloride | 8.7 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 21 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 53 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 3.7 | |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 3.3 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-011-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O09

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072321.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-011-GW70

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No. N5203  Site: 36 SYLVE  Location: LB15285  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O09

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072321.D

Level: (low/med)  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/23/01

GC Column: RTX624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 7  (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.40 | 82 | J |
| 2. 1759-53-1 | Cyclopropanecarboxylic acid | 3.59 | 18 | J |
| 3. 106-98-9 | 1-Butene | 4.25 | 12 | J |
| 4. 106-98-9 | 1-Butene | 4.28 | 6.9 | J |
| 5. 1823-52-5 | 2-Oxetanone, 4,4-dimethyl- | 4.64 | 6.4 | J |
| 6. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 6.79 | 10 | J |
| 7. 33021-02-2 | Propane, 1-(1,1-dimethyletho | 24.91 | 4.8 | J |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-GP-011-GW60**

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5203  Site: 36 SYLVES Location: LB15285  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O10

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072322.D

Level: (low/med)  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/23/01

GC Column: RTX624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 16 | |
| 75-09-2 | Methylene Chloride | 10 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 21 | |
| 67-66-3 | Chloroform | 0.3 | U. |
| 71-55-6 | 1,1,1-Trichloroethane | 59 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 4 | |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 4.7 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-011-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O10

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072322.D

Level: (low/med) ____ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____ (uL) Soil Aliquot Volume: ____ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-011-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O10

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072322.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:
Number TICs found: 4 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.40 | 120 | J |
| 2. 4412-91-3 | 3-Furanmethanol | 3.59 | 9.3 | J |
| 3. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 6.79 | 11 | J |
| 4. 33021-02-2 | Propane, 1-(1,1-dimethyletho | 24.91 | 5.6 | J |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-012-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O11

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072323.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 9.4 | |
| 75-09-2 | Methylene Chloride | 8.7 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 3.3 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 16 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 1.1 | |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 1.4 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-012-GW80

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5203  Site: 36 SYLVES Location: LB15285  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O11

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072323.D

Level: (low/med) ______  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/23/01

GC Column: RTX624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-012-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O11

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072323.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 7

Concentration Units:
(ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 75-21-8 | Ethylene oxide | 3.28 | 300 | J |
| 2. 115-11-7 | 1-Propene, 2-methyl- | 4.19 | 15 | J |
| 3. 115-11-7 | 1-Propene, 2-methyl- | 4.21 | 13 | J |
| 4. 109-67-1 | 1-Pentene | 5.67 | 7.7 | J |
| 5. 106-88-7 | Oxirane, ethyl- | 5.76 | 7.7 | J |
| 6. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 6.72 | 13 | J |
| 7. 50649-02-0 | L-Proline, 1-[(2,4-dichlorop | 7.11 | 7.8 | J |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-012-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O12

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072325.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 8.5 | |
| 75-09-2 | Methylene Chloride | 8.7 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 8.4 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 8 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 0.4 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-012-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O12

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072325.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-GP-012-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: 012

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072325.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Number TICs found: 10

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.40 | 48 | J |
| 2. 1759-53-1 | Cyclopropanecarboxylic acid | 3.59 | 20 | J |
| 3. 106-98-9 | 1-Butene | 4.25 | 12 | J |
| 4. 106-98-9 | 1-Butene | 4.25 | 7.9 | J |
| 5. 109-67-1 | 1-Pentene | 5.72 | 6.4 | J |
| 6. 2402-06-4 | Cyclopropane, 1,2-dimethyl-, | 6.38 | 5.4 | J |
| 7. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 6.77 | 14 | J |
| 8. 67-64-1 | Acetone | 7.18 | 9.7 | J |
| 9. 763-29-1 | 1-Pentene, 2-methyl- | 8.64 | 8.5 | J |
| 10. 33021-02-2 | Propane, 1-(1,1-dimethyletho | 24.89 | 5.2 | J |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-012-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O13

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072411.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 10 | |
| 75-09-2 | Methylene Chloride | 5.1 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 43 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 13 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 0.4 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-012-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O13

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072411.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |



GMEI-00800

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-GP-012-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: 013

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072411.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 13

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.40 | 100 | J |
| 2. 115-07-1 | Propene | 3.59 | 48 | J |
| 3. 75-28-5 | Isobutane | 3.95 | 13 | J |
| 4. 115-11-7 | 1-Propene, 2-methyl- | 4.25 | 26 | J |
| 5. 115-11-7 | 1-Propene, 2-methyl- | 4.25 | 20 | J |
| 6. 115-11-7 | 1-Propene, 2-methyl- | 4.45 | 9.7 | J |
| 7. 115-11-7 | 1-Propene, 2-methyl- | 4.64 | 15 | J |
| 8. 78-78-4 | Butane, 2-methyl- | 5.27 | 17 | J |
| 9. 109-67-1 | 1-Pentene | 5.74 | 15 | J |
| 10. 78-93-3 | 2-Butanone | 5.83 | 15 | J |
| 11. 563-46-2 | 1-Butene, 2-methyl- | 6.41 | 18 | J |
| 12. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 6.79 | 10 | J |
| 13. 763-29-1 | 1-Pentene, 2-methyl- | 8.64 | 11 | J |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

80
096-GP-013-GW~~60~~
YH
7/31/01

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5203    Site: 36 SYLVES Location: LB15285    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O14

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072324.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/23/01

GC Column: RTX624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.4 | U |
| 75-09-2 | Methylene Chloride | 9 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 4.4 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 0.4 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

80

096-GP-013-GW60

LHL 7/13/01

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O14

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072324.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

SAMPLE NO.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

096-GP-013-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O14

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072324.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 3 Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.40 | 130 | J |
| 2. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 6.79 | 37 | J |
| 3. 504-85-8 | 3-Pentenoic acid, 4-methyl- | 7.15 | 13 | J |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-013-GW70

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5203    Site: 36 SYLVES    Location: LB15285    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O15

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072332.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/23/01

GC Column: RTX624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 4.9 | |
| 75-09-2 | Methylene Chloride | 3 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.2 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 1.6 | |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-013-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O15

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072332.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-013-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O15

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072332.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units:
Number TICs found: 4 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.40 | 270 | J |
| 2. 115-11-7 | 1-Propene, 2-methyl- | 4.22 | 23 | J |
| 3. 115-11-7 | 1-Propene, 2-methyl- | 4.25 | 5 | J |
| 4. 56771-78-9 | 2-Hexenedioic acid, 2,4-dich | 7.26 | 8.4 | J |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-013-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O16

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072333.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 16 | |
| 75-09-2 | Methylene Chloride | 3.4 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 73 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 45 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 3.6 | |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 3.3 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-013-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O16

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072333.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-013-GW60

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No. N5203  Site: 36 SYLVE  Location: LB15285  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O16

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072333.D

Level: (low/med) ____  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/24/01

GC Column: RTX624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)  Soil Aliquot Volume: ____ (uL)

Number TICs found: 13  Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.40 | 110 | J |
| 2. 4412-91-3 | 3-Furanmethanol | 3.56 | 14 | J |
| 3. 123-73-9 | 2-Butenal, (E)- | 3.59 | 16 | J |
| 4. 75-28-5 | Isobutane | 3.92 | 9.8 | J |
| 5. 115-11-7 | 1-Propene, 2-methyl- | 4.22 | 19 | J |
| 6. 115-11-7 | 1-Propene, 2-methyl- | 4.25 | 12 | J |
| 7. 624-64-6 | 2-Butene, (E)- | 4.45 | 9.4 | J |
| 8. 115-11-7 | 1-Propene, 2-methyl- | 4.64 | 14 | J |
| 9. 109-67-1 | 1-Pentene | 5.74 | 11 | J |
| 10. 109-66-0 | Pentane | 5.83 | 10 | J |
| 11. 563-46-2 | 1-Butene, 2-methyl- | 5.91 | 8.7 | J |
| 12. 627-20-3 | 2-Pentene, (Z)- | 6.38 | 8.5 | J |
| 13. 504-85-8 | 3-Pentenoic acid, 4-methyl- | 7.18 | 8.1 | J |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-014-GW80

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5203    Site: 36 SYLVES Location: LB15285    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O17

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072334.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/24/01

GC Column: RTX624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 9.4 | |
| 75-09-2 | Methylene Chloride | 3.2 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 10 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 11 | |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 1.3 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-014-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O17

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072334.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-GP-014-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O17

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072334.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 3 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.40 | 100 | J |
| 2. 123-73-9 | 2-Butenal, (E)- | 3.59 | 13 | J |
| 3. 18748-27-1 | Sulfurous acid, bis(2-methyl | 24.89 | 5.2 | J |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-014-GW70

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5203  Site: 36 SYLVES Location: LB15285  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O18

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072335.D

Level: (low/med) ____  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/24/01

GC Column: RTX624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)  Soil Aliquot Volume: ____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 6.2 | |
| 75-09-2 | Methylene Chloride | 2.9 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 9.3 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 9.5 | |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 1 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-014-GW70

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5203    Site: 36 SYLVES Location: LB15285    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O18

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072335.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/24/01

GC Column: RTX624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |



FORM I VOA    3/90

GMEI-00815

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-014-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O18

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072335.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 6 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.39 | 130 | J |
| 2. 123-73-9 | 2-Butenal, (E)- | 3.59 | 20 | J |
| 3. 115-11-7 | 1-Propene, 2-methyl- | 4.24 | 14 | J |
| 4. 115-11-7 | 1-Propene, 2-methyl- | 4.27 | 9.4 | J |
| 5. 115-11-7 | 1-Propene, 2-methyl- | 4.63 | 6.3 | J |
| 6. 870-46-2 | Hydrazinecarboxylic acid, 1, | 24.89 | 6.1 | J |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-014-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5203 Site: 36 SYLVES Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O19

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072336.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 9.6 | |
| 75-09-2 | Methylene Chloride | 4.2 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 22 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 15 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 12 | |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 1.4 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-014-GW60

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5203  Site: 36 SYLVES Location: LB15285  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O19

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072336.D

Level: (low/med) ______  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/24/01

GC Column: RTX624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-GP-014-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O19

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072336.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 10 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.40 | 200 | J |
| 2. 115-07-1 | Propene | 3.59 | 39 | J |
| 3. | Column Bleed | 3.87 | 8.8 | J |
| 4. 115-11-7 | 1-Propene, 2-methyl- | 4.25 | 22 | J |
| 5. 115-11-7 | 1-Propene, 2-methyl- | 4.25 | 15 | J |
| 6. 563-45-1 | 1-Butene, 3-methyl- | 5.05 | 8.2 | J |
| 7. 109-67-1 | 1-Pentene | 5.74 | 13 | J |
| 8. 112-15-2 | Ethanol, 2-(2-ethoxyethoxy)- | 5.82 | 12 | J |
| 9. 4461-48-7 | 2-Pentene, 4-methyl- | 7.84 | 8.5 | J |
| 10. 763-29-1 | 1-Pentene, 2-methyl- | 8.64 | 9 | J |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-FLDBLK-7/12/0

Lab Name: CHEMTECH   Contract: IMPACT ENVIRONMENTAL

Project No.: N5203   Site: 36 SYLVES Location: LB15285   Group: 5970-VOA

Matrix: (soil/water) WATER   Lab Sample ID: O20

Sample wt/vol: 5.0 (g/mL) ML   Lab File ID: VH072331.D

Level: (low/med) ______   Date Received: 7/13/01

% Moisture: not dec. 100   Date Analyzed: 7/23/01

GC Column: RTX624   ID: 0.53 (mm)   Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)   Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.4 | U |
| 75-09-2 | Methylene Chloride | 5.9 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 2.6 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 0.4 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-FLDBLK-7/12/0

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5203  Site: 36 SYLVES Location: LB15285  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O20

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072331.D

Level: (low/med)  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/23/01

GC Column: RTX624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-FLDBLK-7/12/0

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5203 Site: 36 SYLVE Location: LB15285 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O20

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072331.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/23/01

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 1 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Column Bleed | 3.31 | 130 | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

CHEMTECH 284 Sheffield Street • Mountainside, NJ 07092 Phone: 908.789.8900 Fax: 908.789.8922

# DATA PACKAGE FOR RESULTS SUMMARY



PROJECT NAME: 36 SYLVESTER STREET SITE
PROJECT # 00-096

IMPACT ENVIRONMENTAL
1 VILLAGE PLAZA
KINGS PARK, NY 11754
631-269-8800

CHEMTECH PROJECT N5206ASP
ATTENTION KEVIN KLEAKA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

**096-GP-015-GW80**

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5206  Site: 36 SYLVES Location: LB15286  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O01

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072337.D

Level: (low/med) ______  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/24/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 14 | |
| 75-09-2 | Methylene Chloride | 4.1 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.4 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 31 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 140 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 6.3 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-015-GW80

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5206    Site: 36 SYLVES Location: LB15286    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O01

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072337.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/24/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-015-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5206 Site: 36 SYLVE Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: 001

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072337.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 9 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. | Unknown | 3.56 | 18 | J |
| 2. 115-11-7 | 1-Propene, 2-methyl- | 4.23 | 13 | J |
| 3. 106-98-9 | 1-Butene | 4.25 | 9.7 | J |
| 4. 109-67-1 | 1-Pentene | 5.72 | 9.3 | J |
| 5. 109-66-0 | Pentane | 5.83 | 9.3 | J |
| 6. 67-64-1 | Acetone | 7.18 | 11 | J |
| 7. | Unknown | 7.81 | 7 | J |
| 8. 156-59-2 | Ethene, 1,2-dichloro-, (Z)- | 10.54 | 13 | J |
| 9. | Unknown | 24.89 | 6.1 | J |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-015-GW80DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O01DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072412.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 4.2 | UD |
| 75-09-2 | Methylene Chloride | 66 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 2.2 | UD |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 58 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 180 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 2.8 | UD |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-015-GW80DL

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5206    Site: 36 SYLVES    Location: LB15286    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O01DL

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072412.D

Level: (low/med)    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/24/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 10.0

Soil Extract Volume: (uL)    Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-015-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072338.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 26 | |
| 75-09-2 | Methylene Chloride | 4.5 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 29 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 100 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 490 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 20 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-GP-015-GW70**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072338.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-015-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5206 Site: 36 SYLVE Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072338.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 1 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 156-59-2 | Ethene, 1,2-dichloro-, (Z)- | 10.54 | 140 | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-015-GW70DL

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5206  Site: 36 SYLVES Location: LB15286  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O02DL

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072413.D

Level: (low/med)  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/24/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 25.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 28 | UD |
| 75-01-4 | Vinyl Chloride | 26 | UD |
| 74-83-9 | Bromomethane | 15 | UD |
| 75-00-3 | Chloroethane | 19 | UD |
| 75-69-4 | Trichlorofluoromethane | 10 | UD |
| 75-35-4 | 1,1-Dichloroethene | 10 | UD |
| 75-09-2 | Methylene Chloride | 170 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 11 | UD |
| 75-34-3 | 1,1-Dichloroethane | 5.6 | UD |
| 67-66-3 | Chloroform | 6.4 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 200 | BD |
| 56-23-5 | Carbon Tetrachloride | 7.6 | UD |
| 71-43-2 | Benzene | 6.8 | UD |
| 107-06-2 | 1,2-Dichloroethane | 8 | UD |
| 79-01-6 | Trichloroethene | 810 | D |
| 78-87-5 | 1,2-Dichloropropane | 10 | UD |
| 75-27-4 | Bromodichloromethane | 7.1 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 28 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 5.8 | UD |
| 108-88-3 | Toluene | 6.4 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 7.5 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 8.5 | UD |
| 127-18-4 | Tetrachloroethene | 32 | D |
| 124-48-1 | Dibromochloromethane | 7 | UD |
| 108-90-7 | Chlorobenzene | 6.2 | UD |
| 100-41-4 | Ethyl Benzene | 11 | UD |
| 95-47-6 | o-Xylene | 11 | UD |
| 136777-61-2 | m/p-Xylenes | 9.8 | UD |
| 75-25-2 | Bromoform | 8.7 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 6.4 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 9.7 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 7.6 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 5.5 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-015-GW70DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O02DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072413.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 25.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units:
(ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 810 | UD |
| 107-13-1 | Acrylonitrile | 77 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-015-GW60

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5206  Site: 36 SYLVES Location: LB15286  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O03

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072339.D

Level: (low/med) ____  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/24/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)  Soil Aliquot Volume: ____ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 32 | |
| 75-09-2 | Methylene Chloride | 5.1 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 60 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 80 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 560 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 36 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-GP-015-GW60**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072339.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-015-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5206 Site: 36 SYLVE Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072339.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 1

Concentration Units:
(ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 156-59-2 | Ethene, 1,2-dichloro-, (Z)- | 10.54 | 40 | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-015-GW60DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O03DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072414.D

Level: (low/med) ________ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 25.0

Soil Extract Volume: ________ (uL) Soil Aliquot Volume: ________ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 28 | UD |
| 75-01-4 | Vinyl Chloride | 26 | UD |
| 74-83-9 | Bromomethane | 15 | UD |
| 75-00-3 | Chloroethane | 19 | UD |
| 75-69-4 | Trichlorofluoromethane | 10 | UD |
| 75-35-4 | 1,1-Dichloroethene | 150 | D |
| 75-09-2 | Methylene Chloride | 160 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 11 | UD |
| 75-34-3 | 1,1-Dichloroethane | 80 | D |
| 67-66-3 | Chloroform | 6.4 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 180 | BD |
| 56-23-5 | Carbon Tetrachloride | 7.6 | UD |
| 71-43-2 | Benzene | 6.8 | UD |
| 107-06-2 | 1,2-Dichloroethane | 8 | UD |
| 79-01-6 | Trichloroethene | 1000 | D |
| 78-87-5 | 1,2-Dichloropropane | 10 | UD |
| 75-27-4 | Bromodichloromethane | 7.1 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 28 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 5.8 | UD |
| 108-88-3 | Toluene | 6.4 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 7.5 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 8.5 | UD |
| 127-18-4 | Tetrachloroethene | 54 | D |
| 124-48-1 | Dibromochloromethane | 7 | UD |
| 108-90-7 | Chlorobenzene | 6.2 | UD |
| 100-41-4 | Ethyl Benzene | 11 | UD |
| 95-47-6 | o-Xylene | 11 | UD |
| 136777-61-2 | m/p-Xylenes | 9.8 | UD |
| 75-25-2 | Bromoform | 8.7 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 6.4 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 9.7 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 7.6 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 5.5 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-015-GW60DL

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5206    Site: 36 SYLVES    Location: LB15286    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O03DL

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072414.D

Level: (low/med) ____    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/24/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 25.0

Soil Extract Volume: ____ (uL)    Soil Aliquot Volume: ____ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 810 | UD |
| 107-13-1 | Acrylonitrile | 77 | UD |



FORM I VOA    3/90

GMEI-00838

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-016-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072340.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 31 | |
| 75-09-2 | Methylene Chloride | 5 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 34 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 150 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 190 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 24 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-016-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072340.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

**096-GP-016-GW80**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5206 Site: 36 SYLVE Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072340.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units:

Number TICs found: 2 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 156-59-2 | Ethene, 1,2-dichloro-, (Z)- | 10.54 | 100 | J |
| 2. 18748-27-1 | Sulfurous acid, bis(2-methyl | 24.89 | 6.6 | J |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-016-GW80DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O04DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072415.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 87 | D |
| 75-09-2 | Methylene Chloride | 68 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 45 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 230 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 240 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 31 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-016-GW80DL

Lab Name: CHEMTECH   Contract: IMPACT ENVIRONMENTAL

Project No.: N5206   Site: 36 SYLVES   Location: LB15286   Group: 5970-VOA

Matrix: (soil/water) WATER   Lab Sample ID: O04DL

Sample wt/vol: 5.0 (g/mL) ML   Lab File ID: VH072415.D

Level: (low/med) ____   Date Received: 7/13/01

% Moisture: not dec. 100   Date Analyzed: 7/24/01

GC Column: DB624   ID: 0.53 (mm)   Dilution Factor: 10.0

Soil Extract Volume: ____ (uL)   Soil Aliquot Volume: ____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-016-GW70

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5206    Site: 36 SYLVES Location: LB15286    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O05

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072341.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/24/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 32 | |
| 75-09-2 | Methylene Chloride | 6.6 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 48 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 160 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 190 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 21 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-016-GW70

Lab Name: CHEMTECH　　Contract: IMPACT ENVIRONMENTAL

Project No.: N5206　　Site: 36 SYLVES　Location: LB15286　　Group: 5970-VOA

Matrix: (soil/water) WATER　　Lab Sample ID: O05

Sample wt/vol: 5.0 (g/mL) ML　　Lab File ID: VH072341.D

Level: (low/med) ______　　Date Received: 7/13/01

% Moisture: not dec. 100　　Date Analyzed: 7/24/01

GC Column: DB624　ID: 0.53 (mm)　　Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)　　Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-GP-016-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5206 Site: 36 SYLVE Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: 005

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072341.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 4 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 625-38-7 | 3-Butenoic acid | 3.59 | 21 | J |
| 2. 115-11-7 | 1-Propene, 2-methyl- | 4.22 | 11 | J |
| 3. 115-11-7 | 1-Propene, 2-methyl- | 4.25 | 7.6 | J |
| 4. 156-59-2 | Ethene, 1,2-dichloro-, (Z)- | 10.54 | 190 | J |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-016-GW70DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O05DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072416.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 88 | D |
| 75-09-2 | Methylene Chloride | 68 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 60 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 270 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 260 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 28 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
**096-GP-016-GW70DL**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O05DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072416.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-016-GW60

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5206  Site: 36 SYLVES Location: LB15286  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: 006

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072342.D

Level: (low/med)  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/24/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: (uL)  Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 33 | |
| 75-09-2 | Methylene Chloride | 5.7 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 31 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 130 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 230 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 29 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-016-GW60

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5206    Site: 36 SYLVES Location: LB15286    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O06

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072342.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/24/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
**096-GP-016-GW60**

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5206 Site: 36 SYLVE Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O06

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072342.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 5 Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 1759-53-1 | Cyclopropanecarboxylic acid | 3.56 | 8.3 | J |
| 2. | Unknown | 3.59 | 9.1 | J |
| 3. 115-11-7 | 1-Propene, 2-methyl- | 4.22 | 9.4 | J |
| 4. 115-11-7 | 1-Propene, 2-methyl- | 4.25 | 7 | J |
| 5. 156-60-5 | Ethene, 1,2-dichloro-, (E)- | 10.55 | 96 | J |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-016-GW60DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O06DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072417.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 48 | D |
| 75-09-2 | Methylene Chloride | 74 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 40 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 220 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 320 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 38 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-016-GW60DL

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5206    Site: 36 SYLVES Location: LB15286    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O06DL

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072417.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/24/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 10.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-017-GW80

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5206    Site: 36 SYLVES    Location: LB15286    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O07

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072343.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/24/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 23 | |
| 75-09-2 | Methylene Chloride | 6.9 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 12 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 51 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 220 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 13 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-017-GW80

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O07

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072343.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

**096-GP-017-GW80**

Lab Name: CHEMTECH　Contract: IMPACT ENVIRONMENTAL

Project No. N5206　Site: 36 SYLVE　Location: LB15286　Group: 5970-VOA

Matrix: (soil/water) WATER　Lab Sample ID: O07

Sample wt/vol: 5.0 (g/mL) ML　Lab File ID: VH072343.D

Level: (low/med) ____　Date Received: 7/13/01

% Moisture: not dec. 100　Date Analyzed: 7/24/01

GC Column: DB624　ID: 0.53 (mm)　Dilution Factor: 1.0

Soil Extract Volume: ____ (uL)　Soil Aliquot Volume: ____ (uL)

Concentration Units:

Number TICs found: 3　(ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 115-11-7 | 1-Propene, 2-methyl- | 4.22 | 7.5 | J |
| 2. 2610-95-9 | 2H-Pyran-2-one, tetrahydro-6 | 4.25 | 5.4 | J |
| 3. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 6.79 | 26 | J |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-017-GW80DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O07DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072604.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/26/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 77 | D |
| 75-09-2 | Methylene Chloride | 60 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 19 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 48 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 240 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 14 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-017-GW80DL

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5206    Site: 36 SYLVES    Location: LB15286    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O07DL

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072604.D

Level: (low/med) ____    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/26/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 10.0

Soil Extract Volume: ____ (uL)    Soil Aliquot Volume: ____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-017-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O08

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072344.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 26 | |
| 75-09-2 | Methylene Chloride | 6.8 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 17 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 60 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 140 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 12 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-GP-017-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 . Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O08

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072344.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-GP-017-GW70

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5206 Site: 36 SYLVE Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O08

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072344.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Number TICs found: 4 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 115-11-7 | 1-Propene, 2-methyl- | 4.25 | 9.4 | J |
| 2. | Unknown | 4.27 | 6.2 | J |
| 3. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 6.80 | 19 | J |
| 4. 156-60-5 | Ethene, 1,2-dichloro-, (E)- | 10.55 | 18 | J |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-017-GW70DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O08DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072605.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/26/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 67 | D |
| 75-09-2 | Methylene Chloride | 61 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 25 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 50 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 140 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 13 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-017-GW70DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O08DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072605.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/26/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | Concentration (ug/L) | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-017-GW60

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5206  Site: 36 SYLVES Location: LB15286  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O09

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072405.D

Level: (low/med) ______  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/24/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 1.0

Soil Extract Volume: ______ (uL)  Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 22 | |
| 75-09-2 | Methylene Chloride | 4.8 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 21 | |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 120 | E |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 100 | E |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 25 | |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-017-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O09

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072405.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
096-GP-017-GW60

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5206 Site: 36 SYLVE Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O09

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072405.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 6.79 | 10 | J |
| 2. 156-60-5 | Ethene, 1,2-dichloro-, (E)- | 10.55 | 98 | J |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-017-GW60DL

Lab Name: CHEMTECH  Contract: IMPACT ENVIRONMENTAL

Project No.: N5206  Site: 36 SYLVES Location: LB15286  Group: 5970-VOA

Matrix: (soil/water) WATER  Lab Sample ID: O09DL

Sample wt/vol: 5.0 (g/mL) ML  Lab File ID: VH072606.D

Level: (low/med) ____  Date Received: 7/13/01

% Moisture: not dec. 100  Date Analyzed: 7/26/01

GC Column: DB624  ID: 0.53 (mm)  Dilution Factor: 10.0

Soil Extract Volume: ____ (uL)  Soil Aliquot Volume: ____ (uL)

| CAS No. | Compound | Concentration Units: (ug/L or ug/Kg) ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11 | UD |
| 75-01-4 | Vinyl Chloride | 10 | UD |
| 74-83-9 | Bromomethane | 6.1 | UD |
| 75-00-3 | Chloroethane | 7.4 | UD |
| 75-69-4 | Trichlorofluoromethane | 4.1 | UD |
| 75-35-4 | 1,1-Dichloroethene | 39 | D |
| 75-09-2 | Methylene Chloride | 71 | BD |
| 156-60-5 | trans-1,2-Dichloroethene | 4.5 | UD |
| 75-34-3 | 1,1-Dichloroethane | 41 | D |
| 67-66-3 | Chloroform | 2.6 | UD |
| 71-55-6 | 1,1,1-Trichloroethane | 130 | BD |
| 56-23-5 | Carbon Tetrachloride | 3 | UD |
| 71-43-2 | Benzene | 2.7 | UD |
| 107-06-2 | 1,2-Dichloroethane | 3.2 | UD |
| 79-01-6 | Trichloroethene | 120 | D |
| 78-87-5 | 1,2-Dichloropropane | 4 | UD |
| 75-27-4 | Bromodichloromethane | 2.9 | UD |
| 110-75-8 | 2-Chloro-vinyl-ether | 11 | UD |
| 10061-02-6 | t-1,3-Dichloropropene | 2.3 | UD |
| 108-88-3 | Toluene | 2.6 | UD |
| 10061-01-5 | cis-1,3-Dichloropropene | 3 | UD |
| 79-00-5 | 1,1,2-Trichloroethane | 3.4 | UD |
| 127-18-4 | Tetrachloroethene | 33 | D |
| 124-48-1 | Dibromochloromethane | 2.8 | UD |
| 108-90-7 | Chlorobenzene | 2.5 | UD |
| 100-41-4 | Ethyl Benzene | 4.2 | UD |
| 95-47-6 | o-Xylene | 4.6 | UD |
| 136777-61-2 | m/p-Xylenes | 3.9 | UD |
| 75-25-2 | Bromoform | 3.5 | UD |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 2.6 | UD |
| 541-73-1 | 1,3-Dichlorobenzene | 3.9 | UD |
| 106-46-7 | 1,4-Dichlorobenzene | 3 | UD |
| 95-50-1 | 1,2-Dichlorobenzene | 2.2 | UD |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-GP-017-GW60DL

Lab Name: CHEMTECH    Contract: IMPACT ENVIRONMENTAL

Project No.: N5206    Site: 36 SYLVES Location: LB15286    Group: 5970-VOA

Matrix: (soil/water) WATER    Lab Sample ID: O09DL

Sample wt/vol: 5.0 (g/mL) ML    Lab File ID: VH072606.D

Level: (low/med) ______    Date Received: 7/13/01

% Moisture: not dec. 100    Date Analyzed: 7/26/01

GC Column: DB624    ID: 0.53 (mm)    Dilution Factor: 10.0

Soil Extract Volume: ______ (uL)    Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 320 | UD |
| 107-13-1 | Acrylonitrile | 31 | UD |

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

096-TRIPBLANK/12/

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O10

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072404.D

Level: (low/med) ______ Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 1.1 | U |
| 75-01-4 | Vinyl Chloride | 1 | U |
| 74-83-9 | Bromomethane | 0.6 | U |
| 75-00-3 | Chloroethane | 0.7 | U |
| 75-69-4 | Trichlorofluoromethane | 0.4 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.4 | U |
| 75-09-2 | Methylene Chloride | 10 | B |
| 156-60-5 | trans-1,2-Dichloroethene | 0.4 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.2 | U |
| 67-66-3 | Chloroform | 0.3 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 2.3 | B |
| 56-23-5 | Carbon Tetrachloride | 0.3 | U |
| 71-43-2 | Benzene | 0.3 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.3 | U |
| 79-01-6 | Trichloroethene | 0.4 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.4 | U |
| 75-27-4 | Bromodichloromethane | 0.3 | U |
| 110-75-8 | 2-Chloro-vinyl-ether | 1.1 | U |
| 10061-02-6 | t-1,3-Dichloropropene | 0.2 | U |
| 108-88-3 | Toluene | 0.3 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.3 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.3 | U |
| 127-18-4 | Tetrachloroethene | 0.3 | U |
| 124-48-1 | Dibromochloromethane | 0.3 | U |
| 108-90-7 | Chlorobenzene | 0.2 | U |
| 100-41-4 | Ethyl Benzene | 0.4 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 136777-61-2 | m/p-Xylenes | 0.4 | U |
| 75-25-2 | Bromoform | 0.3 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.3 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.4 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.3 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.2 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
096-TRIPBLANK/12/

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: N5206 Site: 36 SYLVES Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O10

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072404.D

Level: (low/med) Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS No. | Compound | ug/L | Q |
|---|---|---|---|
| 107-02-8 | Acrolein | 32 | U |
| 107-13-1 | Acrylonitrile | 3.1 | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

096-TRIPBLANK/12/

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. N5206 Site: 36 SYLVE Location: LB15286 Group: 5970-VOA

Matrix: (soil/water) WATER Lab Sample ID: O10

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VH072404.D

Level: (low/med) . Date Received: 7/13/01

% Moisture: not dec. 100 Date Analyzed: 7/24/01

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 2

Concentration Units: (ug/L or ug/Kg) ug/L

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|---|---|---|---|---|
| 1. 76-13-1 | Ethane, 1,1,2-trichloro-1,2, | 6.79 | 14 | J |
| 2. 56336-11-9 | 3-Penten-2-one, 4-methyl-, o | 7.15 | 8.9 | J |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

CHEMTECH, 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel(732)225-4111,Fax(732)225-4110

TABULATED ANALYTICAL REPORT
QUALITATIVE GC FINGERPRINT BY 8015

Project Name: 36 SYLVESTER STREET
CLIENT: IMPACT ENVIRONMENTAL

Lab Project: L3772

MATRIX: WATER
Date Received: 3/31/01
Date Extracted: 4/11/01
Date Analysed: 4/12/01
Date Reported: 4/13/01
Analyst: A.A.

| CLIENT ID | FILE ID | | LAB ID | | FUEL TYPE |
|---|---|---|---|---|---|
| 096-FD-003-CO | BA2715 | | L3772-17 | | E |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

COMMENTS:
FT: FUEL TYPE
MDL= METHOD DETECTION LIMIT
A=GASOLINE
B= KERSOENE WITH SOME UNKNOWN FUEL OIL
C= #2 FUEL OIL
D= #4 FUEL OIL
E= NO CALIBRATED FUEL TYPE DETECTED
F=KEROSENE
H= #6 FUEL OIL
P= CLIENT KNOWN FUEL PRODUCT
KW KEROSENE WEATHERED
PI= PAINT THINNER
MS= MINERAL SPIRITS

< = LESS THAN
J= 10 W LUBRICATING OIL
K= 20 W LUBRICATING OIL
L= 30W LUBRICATING OIL
M= 40 W LUBRICATING OIL
CW= #2 FUEL OIL WEATHERED
DW= #4 FUEL OIL WEATHERED
HW= #6 FUEL OIL, WEATHERED
ND = NOT DETECTED (CONC)
CS = CLIENT STANDARD
N = JET FUEL STANDARD
S= DIESEL
CT=COAL TAR

# APPENDIX D
## WASTE CLASSIFICATION ANALYSIS DATA AND MANIFESTS

36 Sylvester Street Site
Site Code 1-30-043U
Westbury, New York

# PRIVATE
# NON-HAZARDOUS
# DOCUMENT OF CARGO

N.Y. State 364 Permit No. 1A-033

RGM ID # 136

Truck License Number 29749AU

## IDENTIFICATION

Company name, mailing address and telephone number

Generator: Impact (Contractor) 36 Sylvester Ln Westbury NY

Transporter: RGM Earthmoving 972 Nichols Rd Deer Park NY

TSDF Treatment Storage or Disposal Facility: RGM Earthmoving 972 Nichols Rd Deer Park NY

### WASTE INFORMATION

| Description | Containers No. | Containers Type | Total Quantity | Unit Wt/Vol | RGM Code # |
|---|---|---|---|---|---|
| Non Hazardous Solid | 1 | R.O | 15 | yds | |
| | | | | | |
| | | | | | |
| | | | | | |

I hereby certify that the above waste description is complete and accurate, and that no component exist in the wastes which render it hazardous as defined by 6 NY CRR Section 371 and 372.

[signature] at 36 Sylvester Ln

Generator's Signature  Date 5-16-—

[signature]

Transporter's Signature  Date 5-16-02

[signature]

TSDF Signature  Date 5/16/02

WHITE—CHEMICAL DEPT.  YELLOW—TRANSPORTER #1  PINK—GENERATOR COPY  GOLDENROD—TSDF COPY

**LONG ISLAND ANALYTICAL LABORATORIES INC.**

NYSDOH ELAP# 11693
USEPA# NY01273

*"TOMORROWS ANALYTICAL SOLUTIONS TODAY"*



May 15, 2002

Impact Environmental
Kristin Scroope
1 Village Plaza
Kings Park, New York, 11754

**Re: 00-096, Westbury**

Dear Ms. Scroope:

Enclosed please find the Laboratory Analysis Report(s) for sample(s) received on May 10, 2002. Long Island Analytical Laboratories analyzed the samples on May 15, 2002 for the following:

| CLIENT ID | ANALYSIS |
|---|---|
| 00-096-UIW-001-WCA | TCLP Metals |

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,

*Long Island Analytical Laboratories, Inc.*

101-4 Colin Drive • Holbrook, New York 11741
Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

| Client: Impact | Client ID: 00-096, Westbury (00-096-UIW-001-WCA) |
|---|---|
| Date received: 5/10/02 | Laboratory ID: 0216698 |
| Date extracted: 5/13/02 | Matrix: Soil |
| Date analyzed: 5/14, 5/15/02 | ELAP #: 11693 |

# TCLP METALS ANALYSIS

| PARAMETER | REGULATORY LIMIT | RESULTS mg/L |
|---|---|---|
| SILVER, Ag | 5.00 PPM | <0.05 |
| ARSENIC, As | 5.00 PPM | <0.05 |
| BARIUM, Ba | 100.00 PPM | <1.00 |
| CADMIUM, Cd | 1.00 PPM | <0.05 |
| CHROMIUM, Cr | 5.00 PPM | <0.05 |
| MERCURY, Hg | 0.20 PPM | <0.020 |
| LEAD, Pb | 5.00 PPM | <0.05 |
| SELENIUM, Se | 1.00 PPM | <0.05 |

Method: SW846, 1311 extraction tclp, 7000 series analysis

Michael Veraldi

Laboratory Director

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROWS ANALYTICAL SOLUTIONS TODAY"
101-4 Colin Drive • Holbrook, New York 11741
Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROWS ANALYTICAL SOLUTIONS TODAY"
101-4 Colin Drive • Holbrook, New York 11741 • Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com



# CHAIN OF COUSTODY / REQUEST FOR ANALYSIS DOCUMENT

| CLIENT NAME/ADDRESS | CONTACT: | SAMPLER (SIGNATURE) | DATE | TIME | SAMPLE(S) SEALED |
|---|---|---|---|---|---|
| [illegible] | PHONE: [illegible] | [illegible] | [illegible] | [illegible] | YES / NO |
| [illegible] | FAX: [illegible] | SAMPLER NAME (PRINT): [illegible] | | | CORRECT CONTAINER(S): YES / NO |

PROJECT LOCATION: [illegible]

TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month.

ANALYSIS REQUIRED: [illegible]

| LABORATORY ID # (For Laboratory Use Only) | MATRIX | TYPE | PRES. | SAMPLE # - LOCATION | [illegible] | # OF CONTAINERS |
|---|---|---|---|---|---|---|
| 1. | S | G | | [illegible]-W/CA | X | 2 |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. | | | | | | |
| 6. | | | | | | |
| 7. | | | | | | |
| 8. | | | | | | |
| 9. | | | | | | |
| 10. | | | | | | |
| 11. | | | | | | |
| 12. | | | | | | |
| 13. | | | | | | |
| 14. | | | | | | |

**MATRIX** S=SOIL; L=LIQUID; SL=SLUDGE; A=AIR; W=WIPE; P=PAINT CHIPS; B=BULK MATERIAL

**TYPE** G=GRAB; C=COMPOSITE, SS=SPLIT SPOON **PRES** ICE, HCL, $H_2SO_4$, NAOH

TURNAROUND REQUIRED: [illegible]
NORMAL ☑ STAT ☐ BY [illegible]

COMMENTS / INSTRUCTIONS: [illegible]

| RELINQUISHED BY (SIGNATURE) | DATE / TIME | PRINTED NAME | RECEIVED BY LAB (SIGNATURE) | DATE / TIME | PRINTED NAME |
|---|---|---|---|---|---|
| [illegible] | DATE [illegible] TIME | [illegible] | | DATE TIME | |

| RELINQUISHED BY (SIGNATURE) | DATE / TIME | PRINTED NAME | RECEIVED BY SAMPLE CUSTODIAN | DATE / TIME | PRINTED NAME |
|---|---|---|---|---|---|
| | DATE TIME | | [illegible] | DATE [illegible] TIME [illegible] | [illegible] |

CHEMTECH 284 Sheffield Street • Mountainside, NJ 07092 Phone: 908.789.8900 Fax: 908.789.8922

# ANALYTICAL RESULTS SUMMARY

**PROJECT NAME: SYLVESTER STREET**



**IMPACT ENVIRONMENTAL**
**1 VILLAGE ROAD**
**KINGS PARK, NY 11754**
**631-269-8800**

| | |
|---|---|
| **CHEMTECH PROJECT NO.** | **P2591** |
| **ATTENTION:** | **KEVIN KLEAKA** |

*Chemtech Consulting Group*

**Volatiles**
SW-846

SDG No.: P2591-01

Client: Impact Environmental

| | | | |
|---|---|---|---|
| Sample ID: | P2591-01 | Client ID: | 096-UIW-001-EP-20' |
| Date Collected: | 5/10/02 | Date Received: | 5/13/02 |
| Date Analyzed: | 5/17/02 | Matrix: | SOIL |
| File ID: | VA051707.D | Analytical Run ID: | RUN1 |
| Dilution: | 1 | Instrument ID: | MSVOAD |
| Analytical Method: | 8260 | Associated Blank: | VBA0517S2 |
| Sample Wt/Wol: | 5.0 Units: g | Soil Extract Vol: | |
| Soil Aliquot Vol: | | % Moisture: | 13 |

| Parameter | Concentration | C | RDL | MDL | Units |
|---|---|---|---|---|---|
| **TARGETS** | | | | | |
| Chloromethane | < 2.0 | U | 5.7 | 2.0 | ug/Kg |
| Bromomethane | < 1.1 | U | 5.7 | 1.1 | ug/Kg |
| Vinyl chloride | < 1.1 | U | 5.7 | 1.1 | ug/Kg |
| Chloroethane | < 1.5 | U | 5.7 | 1.5 | ug/Kg |
| Methylene Chloride | < 1.5 | U | 5.7 | 1.5 | ug/Kg |
| Acetone | < 4.0 | U | 5.7 | 4.0 | ug/Kg |
| Carbon disulfide | < 1.5 | U | 5.7 | 1.5 | ug/Kg |
| 1,1-Dichloroethene | < 1.3 | U | 5.7 | 1.3 | ug/Kg |
| 1,1-Dichloroethane | < 1.0 | U | 5.7 | 1.0 | ug/Kg |
| trans-1,2-Dichloroethene | < 1.3 | U | 5.7 | 1.3 | ug/Kg |
| cis-1,2-Dichloroethene | < 1.0 | U | 5.7 | 1.0 | ug/Kg |
| Chloroform | < 1.1 | U | 5.7 | 1.1 | ug/Kg |
| 1,2-Dichloroethane | < 1.3 | U | 5.7 | 1.3 | ug/Kg |
| 2-Butanone | < 6.2 | U | 5.7 | 6.2 | ug/Kg |
| 1,1,1-Trichloroethane | < 1.1 | U | 5.7 | 1.1 | ug/Kg |
| Carbon Tetrachloride | < 2.4 | U | 5.7 | 2.4 | ug/Kg |
| Bromodichloromethane | < 0.92 | U | 5.7 | 0.92 | ug/Kg |
| 1,2-Dichloropropane | < 0.92 | U | 5.7 | 0.92 | ug/Kg |
| cis-1,3-Dichloropropene | < 1.0 | U | 5.7 | 1.0 | ug/Kg |
| Trichloroethene | < 1.1 | U | 5.7 | 1.1 | ug/Kg |
| Dibromochloromethane | < 1.0 | U | 5.7 | 1.0 | ug/Kg |
| 1,1,2-Trichloroethane | < 1.3 | U | 5.7 | 1.3 | ug/Kg |
| Benzene | < 1.1 | U | 5.7 | 1.1 | ug/Kg |
| t-1,3-Dichloropropene | < 1.1 | U | 5.7 | 1.1 | ug/Kg |
| Bromoform | < 1.3 | U | 5.7 | 1.3 | ug/Kg |
| 4-Methyl-2-Pentanone | < 4.6 | U | 5.7 | 4.6 | ug/Kg |
| 2-Hexanone | < 6.9 | U | 5.7 | 6.9 | ug/Kg |
| Tetrachloroethene | < 1.4 | U | 5.7 | 1.4 | ug/Kg |
| 1,1,2,2-Tetrachloroethane | < 1.1 | U | 5.7 | 1.1 | ug/Kg |
| Toluene | < 1.3 | U | 5.7 | 1.3 | ug/Kg |
| Chlorobenzene | < 1.3 | U | 5.7 | 1.3 | ug/Kg |
| Ethyl Benzene | < 1.1 | U | 5.7 | 1.1 | ug/Kg |
| Styrene | < 1.6 | U | 5.7 | 1.6 | ug/Kg |
| m/p-Xylenes | < 3.2 | U | 5.7 | 3.2 | ug/Kg |

Volatiles
SW-846

SDG No.: P2591-01

Client: Impact Environmental

| | | | |
|---|---|---|---|
| Sample ID: | P2591-01 | Client ID: | 096-UIW-001-EP-20' |
| Date Collected: | 5/10/02 | Date Received: | 5/13/02 |
| Date Analyzed: | 5/17/02 | Matrix: | SOIL |
| File ID: | VA051707.D | Analytical Run ID: | RUN1 |
| Dilution: | 1 | Instrument ID: | MSVOAD |
| Analytical Method: | 8260 | Associated Blank: | VBA0517S2 |
| Sample Wt/Wol: | 5.0 Units: g | Soil Extract Vol: | |
| Soil Aliquot Vol: | | % Moisture: | 13 |

| Parameter | Concentration | C | RDL | MDL | Units |
|---|---|---|---|---|---|
| o-Xylene | < 1.3 | U | 5.7 | 1.3 | ug/Kg |
| SURROGATES | | | | | |
| 1,2-Dichloroethane-d4 | 50.1 | 100 % | 70 - 121 | | SPK: 50 |
| Toluene-d8 | 52.51 | 105 % | 81 - 117 | | SPK: 50 |
| 4-Bromofluorobenzene | 39.54 | 79 % | 74 - 121 | | SPK: 50 |
| Dibromofluoromethane | 52.31 | 105 % | 80 - 120 | | SPK: 50 |
| INTERNAL STANDARDS | | | | | |
| Pentafluorobenzene | 3358755 | 6.10 | | | |
| 1,4-Difluorobenzene | 3872729 | 7.88 | | | |
| Chlorobenzene-d5 | 3013397 | 14.09 | | | |
| 1,4-Dichlorobenzene-d4 | 1727529 | 19.60 | | | |

## SVOC-TCL BN
SW-846

SDG No.: P2591-01

Client: Impact Environmental

| | | | |
|---|---|---|---|
| Sample ID: | P2591-01 | Client ID: | 096-UIW-001-EP-20' |
| Date Collected: | 5/10/02 | Date Received: | 5/13/02 |
| Date Analyzed: | 5/20/02 | Matrix: | SOIL |
| Date Extracted: | 5/15/02 | File ID: | BA000623.D |
| Dilution: | 1 | Instrument ID: | 5971A |
| Analytical Method: | 8270 | Analytical Run ID: | 1 |
| Sample Wt/Wol: | 30.4 | Extract Vol: | 1000 |
| Injection Vol: | 2 | % Moisture: | 13 |
| Associated Blank: | PB051502-01B | | |

| Parameter | Concentration | C | RDL | MDL | Units |
|---|---|---|---|---|---|
| **TARGETS** | | | | | |
| bis(2-Chloroethyl)ether | < 44 | U | 370 | 44 | ug/Kg |
| 1,2-Dichlorobenzene | < 37 | U | 370 | 37 | ug/Kg |
| 1,3-Dichlorobenzene | < 44 | U | 370 | 44 | ug/Kg |
| 1,4-Dichlorobenzene | < 37 | U | 370 | 37 | ug/Kg |
| 2,2'-oxybis(1-chloropropane) | < 37 | U | 370 | 37 | ug/Kg |
| N-Nitroso-di-n-propylamine | < 37 | U | 370 | 37 | ug/Kg |
| Hexachloroethane | < 41 | U | 370 | 41 | ug/Kg |
| Nitrobenzene | < 37 | U | 370 | 37 | ug/Kg |
| Isophorone | < 37 | U | 370 | 37 | ug/Kg |
| bis(2-Chloroethoxy)methane | < 37 | U | 370 | 37 | ug/Kg |
| 1,2,4-Trichlorobenzene | < 44 | U | 370 | 44 | ug/Kg |
| Naphthalene | < 44 | U | 370 | 44 | ug/Kg |
| 4-Chloroaniline | < 44 | U | 370 | 44 | ug/Kg |
| Hexachlorobutadiene | < 56 | U | 370 | 56 | ug/Kg |
| 2-Methylnaphthalene | < 44 | U | 370 | 44 | ug/Kg |
| Hexachlorocyclopentadiene | < 140 | U | 370 | 140 | ug/Kg |
| 2-Chloronaphthalene | < 44 | U | 370 | 44 | ug/Kg |
| 2-Nitroaniline | < 37 | U | 940 | 37 | ug/Kg |
| Dimethylphthalate | < 37 | U | 370 | 37 | ug/Kg |
| Acenaphthylene | < 44 | U | 370 | 44 | ug/Kg |
| 2,6-Dinitrotoluene | < 37 | U | 370 | 37 | ug/Kg |
| 3-Nitroaniline | < 44 | U | 940 | 44 | ug/Kg |
| Acenaphthene | < 44 | U | 370 | 44 | ug/Kg |
| Dibenzofuran | < 37 | U | 370 | 37 | ug/Kg |
| 2,4-Dinitrotoluene | < 41 | U | 370 | 41 | ug/Kg |
| Diethylphthalate | < 37 | U | 370 | 37 | ug/Kg |
| 4-Chlorophenyl-phenylether | < 44 | U | 370 | 44 | ug/Kg |
| Fluorene | < 41 | U | 370 | 41 | ug/Kg |
| 4-Nitroaniline | < 90 | U | 940 | 90 | ug/Kg |
| N-Nitrosodiphenylamine | < 75 | U | 370 | 75 | ug/Kg |
| 4-Bromophenyl-phenylether | < 49 | U | 370 | 49 | ug/Kg |

## SVOC-TCL BN
SW-846

SDG No.: P2591-01

Client: Impact Environmental

| | | | |
|---|---|---|---|
| Sample ID: | P2591-01 | Client ID: | 096-UIW-001-EP-20' |
| Date Collected: | 5/10/02 | Date Received: | 5/13/02 |
| Date Analyzed: | 5/20/02 | Matrix: | SOIL |
| Date Extracted: | 5/15/02 | File ID: | BA000623.D |
| Dilution: | 1 | Instrument ID: | 5971A |
| Analytical Method: | 8270 | Analytical Run ID: | 1 |
| Sample Wt/Wol: | 30.4 | Extract Vol: | 1000 |
| Injection Vol: | 2 | % Moisture: | 13 |
| Associated Blank: | PB051502-01B | | |

| Parameter | Concentration | C | RDL | MDL | Units |
|---|---|---|---|---|---|
| **TARGETS** | | | | | |
| Hexachlorobenzene | < 41 | U | 370 | 41 | ug/Kg |
| Phenanthrene | < 37 | U | 370 | 37 | ug/Kg |
| Anthracene | < 49 | U | 370 | 49 | ug/Kg |
| Carbazole | < 15 | U | 370 | 15 | ug/Kg |
| Di-n-butylphthalate | < 44 | U | 370 | 44 | ug/Kg |
| Fluoranthene | < 37 | U | 370 | 37 | ug/Kg |
| Pyrene | < 37 | U | 370 | 37 | ug/Kg |
| Butylbenzylphthalate | < 37 | U | 370 | 37 | ug/Kg |
| 3,3'-Dichlorobenzidine | < 37 | U | 370 | 37 | ug/Kg |
| Benzo(a)anthracene | < 37 | U | 370 | 37 | ug/Kg |
| Chrysene | < 60 | U | 370 | 60 | ug/Kg |
| bis(2-Ethylhexyl)phthalate | < 37 | U | 370 | 37 | ug/Kg |
| Di-n-octyl phthalate | < 56 | U | 370 | 56 | ug/Kg |
| Benzo(b)fluoranthene | < 37 | U | 370 | 37 | ug/Kg |
| Benzo(k)fluoranthene | < 97 | U | 370 | 97 | ug/Kg |
| Benzo(a)pyrene | < 56 | U | 370 | 56 | ug/Kg |
| Indeno(1,2,3-cd)pyrene | < 60 | U | 370 | 60 | ug/Kg |
| Dibenz(a,h)anthracene | < 56 | U | 370 | 56 | ug/Kg |
| Benzo(g,h,i)perylene | < 49 | U | 370 | 49 | ug/Kg |
| **SURROGATES** | | | | | |
| Nitrobenzene-d5 | 165.24 | 83 % | 23 - 120 | | SPK: 200 |
| 2-Fluorobiphenyl | 223.27 | 112 % | 30 - 116 | | SPK: 200 |
| Terphenyl-d14 | 615.83 | 308 % | 18 - 137 | | SPK: 200 |
| **INTERNAL STANDARDS** | | | | | |
| 1,4-Dichlorobenzene-d4 | 316071 | 6.42 | | | |
| Naphthalene-d8 | 1238829 | 7.85 | | | |
| Acenaphthene-d10 | 747350 | 9.62 | | | |
| Phenanthrene-d10 | 1102485 | 11.04 | | | |
| Chrysene-d12 | 307181 | 14.13 | | | |
| Perylene-d12 | 99162 | 17.71 | | | |

*Chemtech Consulting Group*

**SVOC-TCL BN**

SW-846

| | |
|---|---|
| SDG No.: | P2591-01 |
| Client: | Impact Environmental |

| | | | |
|---|---|---|---|
| Sample ID: | P2591-01RE | Client ID: | 096-UIW-001-EP-20'RE |
| Date Collected: | 5/10/02 | Date Received: | 5/13/02 |
| Date Analyzed: | 5/21/02 | Matrix: | SOIL |
| Date Extracted: | 5/15/02 | File ID: | BA000663.D |
| Dilution: | 1 | Instrument ID: | 5971A |
| Analytical Method: | 8270 | Analytical Run ID: | 1 |
| Sample Wt/Wol: | 30.4 | Extract Vol: | 1000 |
| Injection Vol: | 2 | % Moisture: | 13 |
| Associated Blank: | PB051502-01B | | |

| Parameter | Concentration | C | RDL | MDL | Units |
|---|---|---|---|---|---|
| TARGETS | | | | | |
| bis(2-Chloroethyl)ether | < 44 | U | 370 | 44 | ug/Kg |
| 1,2-Dichlorobenzene | < 37 | U | 370 | 37 | ug/Kg |
| 1,3-Dichlorobenzene | < 44 | U | 370 | 44 | ug/Kg |
| 1,4-Dichlorobenzene | < 37 | U | 370 | 37 | ug/Kg |
| 2,2'-oxybis(1-chloropropane) | < 37 | U | 370 | 37 | ug/Kg |
| N-Nitroso-di-n-propylamine | < 37 | U | 370 | 37 | ug/Kg |
| Hexachloroethane | < 41 | U | 370 | 41 | ug/Kg |
| Nitrobenzene | < 37 | U | 370 | 37 | ug/Kg |
| Isophorone | < 37 | U | 370 | 37 | ug/Kg |
| bis(2-Chloroethoxy)methane | < 37 | U | 370 | 37 | ug/Kg |
| 1,2,4-Trichlorobenzene | < 44 | U | 370 | 44 | ug/Kg |
| Naphthalene | < 44 | U | 370 | 44 | ug/Kg |
| 4-Chloroaniline | < 44 | U | 370 | 44 | ug/Kg |
| Hexachlorobutadiene | < 56 | U | 370 | 56 | ug/Kg |
| 2-Methylnaphthalene | < 44 | U | 370 | 44 | ug/Kg |
| Hexachlorocyclopentadiene | < 140 | U | 370 | 140 | ug/Kg |
| 2-Chloronaphthalene | < 44 | U | 370 | 44 | ug/Kg |
| 2-Nitroaniline | < 37 | U | 940 | 37 | ug/Kg |
| Dimethylphthalate | < 37 | U | 370 | 37 | ug/Kg |
| Acenaphthylene | <.44 | U | 370 | 44 | ug/Kg |
| 2,6-Dinitrotoluene | < 37 | U | 370 | 37 | ug/Kg |
| 3-Nitroaniline | < 44 | U | 940 | 44 | ug/Kg |
| Acenaphthene | < 44 | U | 370 | 44 | ug/Kg |
| Dibenzofuran | < 37 | U | 370 | 37 | ug/Kg |
| 2,4-Dinitrotoluene | < 41 | U | 370 | 41 | ug/Kg |
| Diethylphthalate | < 37 | U | 370 | 37 | ug/Kg |
| 4-Chlorophenyl-phenylether | < 44 | U | 370 | 44 | ug/Kg |
| Fluorene | < 41 | U | 370 | 41 | ug/Kg |
| 4-Nitroaniline | < 90 | U | 940 | 90 | ug/Kg |
| N-Nitrosodiphenylamine | < 75 | U | 370 | 75 | ug/Kg |
| 4-Bromophenyl-phenylether | < 49 | U | 370 | 49 | ug/Kg |

*Chemtech Consulting Group*

**SVOC-TCL BN**
**SW-846**

SDG No.: P2591-01

Client: Impact Environmental

| | | | |
|---|---|---|---|
| Sample ID: | P2591-01RE | Client ID: | 096-UIW-001-EP-20'RE |
| Date Collected: | 5/10/02 | Date Received: | 5/13/02 |
| Date Analyzed: | 5/21/02 | Matrix: | SOIL |
| Date Extracted: | 5/15/02 | File ID: | BA000663.D |
| Dilution: | 1 | Instrument ID: | 5971A |
| Analytical Method: | 8270 | Analytical Run ID: | 1 |
| Sample Wt/Wol: | 30.4 | Extract Vol: | 1000 |
| Injection Vol: | 2 | % Moisture: | 13 |
| Associated Blank: | PB051502-01B | | |

| Parameter | Concentration | C | RDL | MDL | Units |
|---|---|---|---|---|---|
| **TARGETS** | | | | | |
| Hexachlorobenzene | < 41 | U | 370 | 41 | ug/Kg |
| Phenanthrene | < 37 | U | 370 | 37 | ug/Kg |
| Anthracene | < 49 | U | 370 | 49 | ug/Kg |
| Carbazole | < 15 | U | 370 | 15 | ug/Kg |
| Di-n-butylphthalate | < 44 | U | 370 | 44 | ug/Kg |
| Fluoranthene | < 37 | U | 370 | 37 | ug/Kg |
| Pyrene | < 37 | U | 370 | 37 | ug/Kg |
| Butylbenzylphthalate | < 37 | U | 370 | 37 | ug/Kg |
| 3,3'-Dichlorobenzidine | < 37 | U | 370 | 37 | ug/Kg |
| Benzo(a)anthracene | < 37 | U | 370 | 37 | ug/Kg |
| Chrysene | < 60 | U | 370 | 60 | ug/Kg |
| bis(2-Ethylhexyl)phthalate | < 37 | U | 370 | 37 | ug/Kg |
| Di-n-octyl phthalate | < 56 | U | 370 | 56 | ug/Kg |
| Benzo(b)fluoranthene | < 37 | U | 370 | 37 | ug/Kg |
| Benzo(k)fluoranthene | < 97 | U | 370 | 97 | ug/Kg |
| Benzo(a)pyrene | < 56 | U | 370 | 56 | ug/Kg |
| Indeno(1,2,3-cd)pyrene | < 60 | U | 370 | 60 | ug/Kg |
| Dibenz(a,h)anthracene | < 56 | U | 370 | 56 | ug/Kg |
| Benzo(g,h,i)perylene | < 49 | U | 370 | 49 | ug/Kg |
| **SURROGATES** | | | | | |
| Nitrobenzene-d5 | 158.01 | 79 % | 23 - 120 | | SPK: 200 |
| 2-Fluorobiphenyl | 192.25 | 96 % | 30 - 116 | | SPK: 200 |
| Terphenyl-d14 | 550.13 | 275 % | 18 - 137 | | SPK: 200 |
| **INTERNAL STANDARDS** | | | | | |
| 1,4-Dichlorobenzene-d4 | 443406 | 6.36 | | | |
| Naphthalene-d8 | 1785596 | 7.79 | | | |
| Acenaphthene-d10 | 1122121 | 9.55 | | | |
| Phenanthrene-d10 | 1369000 | 10.97 | | | |
| Chrysene-d12 | 514157 | 14.01 | | | |
| Perylene-d12 | 103782 | 17.49 | | | |

# METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Impact Environmental SDG No.: P2591 Method Type: SW846

Sample ID: P2591-01 Client ID: 096-UIW-001-EP-20'

Contract: Impact Environmental Lab Code: CHEMED Case No.: SAS No.: P2591

Matrix: SOIL Date Received: 5/13/02 Level: LOW

% Solids: 87

| CAS No. | Analyte | Concentration | Units | C | Qual | M | DL | Instrument ID | Analytical Run |
|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 889 | mg/Kg | | N* | P | 0.84 | P2 | P251502 |
| 7440-36-0 | Antimony | 0.54 | mg/Kg | U | | P | 0.54 | P2 | P251502 |
| 7440-38-2 | Arsenic | 0.49 | mg/Kg | B | | P | 0.32 | P2 | P251502 |
| 7440-39-3 | Barium | 9.6 | mg/Kg | B | | P | 0.09 | P2 | P251502 |
| 7440-41-7 | Beryllium | 0.12 | mg/Kg | B | | P | 0.01 | P2 | P251502 |
| 7440-43-9 | Cadmium | 0.26 | mg/Kg | B | | P | 0.05 | P2 | P251502 |
| 7440-70-2 | Calcium | 289 | mg/Kg | B | | P | 0.76 | P2 | P251502 |
| 7440-47-3 | Chromium | 1.9 | mg/Kg | | * | P | 0.07 | P2 | P251502 |
| 7440-48-4 | Cobalt | 0.22 | mg/Kg | B | | P | 0.07 | P2 | P251502 |
| 7440-50-8 | Copper | 12.3 | mg/Kg | | E | P | 0.10 | P2 | P251502 |
| 7439-89-6 | Iron | 3160 | mg/Kg | | * | P | 2.0 | P2 | P251502 |
| 7439-92-1 | Lead | 2.2 | mg/Kg | | | P | 0.24 | P2 | P251502 |
| 439-95-4 | Magnesium | 141 | mg/Kg | B | | P | 1.1 | P2 | P251502 |
| 439-96-5 | Manganese | 7.3 | mg/Kg | | | P | 0.01 | P2 | P251502 |
| 439-97-6 | Mercury | 0.01 | mg/Kg | | | CV | 0.01 | CV1 | 051502F |
| 440-02-0 | Nickel | 0.72 | mg/Kg | B | | P | 0.21 | P2 | P251502 |
| 440-09-7 | Potassium | 68.8 | mg/Kg | B | N | P | 2.3 | P2 | P251502 |
| 782-49-2 | Selenium | 0.34 | mg/Kg | U | | P | 0.34 | P2 | P251502 |
| 440-22-4 | Silver | 0.11 | mg/Kg | U | | P | 0.11 | P2 | P251502 |
| 440-23-5 | Sodium | 149 | mg/Kg | B | | P | 40.7 | P2 | P251502 |
| 40-28-0 | Thallium | 0.62 | mg/Kg | U | | P | 0.62 | P2 | P251502 |
| 140-62-2 | Vanadium | 2.9 | mg/Kg | B | | P | 0.08 | P2 | P251502 |
| 140-66-6 | Zinc | 11.2 | mg/Kg | | | P | 0.13 | P2 | P251502 |

## METALS

-1-

## INORGANIC ANALYSIS DATA PACKAGE

Client: Impact Environmental SDG No.: P2591 Method Type: SW846

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

CHEMTECH

284 Sheffield Street Mountainside NJ 07092
Tel. 908-789-8900 Fax: 908-789-8922

## DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

| | |
|---|---|
| Value | If the result is a value greater than or equal to the detection limit, report the value |
| U | Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required. |
| J | Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This is flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others. |
| B | Indicates the analyte was found in the blank as well as the sample report as "12 B". |
| E | Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis. |
| D | This flag identifies all compounds identified in an analysis at a secondary dilution factor. |
| P | This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P". |
| N | This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used. |

Department of Environmental Conservation

Division of Environmental Remediation

# Record of Decision
## 36 Sylvester Street Site
## Town of North Hempstead, Nassau County
## New York
## Site Number 1-30-043U

**March 2003**

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* ERIN M. CROTTY, *Commissioner*

## DECLARATION STATEMENT - RECORD OF DECISION

### 36 Sylvester Street Inactive Hazardous Waste Disposal Site
### Town of North Hempstead, Nassau County, New York
### Site No. 1-30-043U

**Statement of Purpose and Basis**

The Record of Decision (ROD) presents the selected remedy for the 36 Sylvester Street site, a Class 2 inactive hazardous waste disposal site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the 36 Sylvester Street inactive hazardous waste disposal site, and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

**Assessment of the Site**

Actual or threatened release of hazardous waste constituents from this site have been addressed by implementing the interim remedial measure identified in this ROD. The removal of contaminated soil from the site has significantly reduced the threat to public health and the environment.

**Description of Selected Remedy**

Based on the results of the Remedial Investigation and Feasibility Study (RI/FS) for the 36 Sylvester Street site and the criteria identified for evaluation of alternatives, the NYSDEC has selected No Further Action. Any groundwater use at the site will comply with the Nassau County Department of Health's use and development restrictions limiting the utilization of groundwater as potable or process water without necessary water quality treatment.

**New York State Department of Health Acceptance**

The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is protective of human health.

**Declaration**

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

MAR 14 2003

Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

## TABLE OF CONTENTS





GMEI-00891

## RECORD OF DECISION

**36 Sylvester Street Site**
**Town of North Hempstead, Nassau County, New York**
**Site No. 1-30-043U**
**March 2003**

## SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) has selected a remedy for the 36 Sylvester Street Site. As more fully described in Sections 3 and 5 of this document, disposal of hazardous wastes including volatile organic compounds such as 1,1,1-trichloroethane, and inorganics (metals) such as chromium, copper, mercury and zinc, at the Site resulted in the following significant threats to the public health and/or the environment:

- a significant threat to human health and the environment associated with this site's contravention of groundwater standards in a sole source aquifer.

The contaminated groundwater at the 36 Sylvester Street Site and within the entire New Cassel Industrial Area (NCIA) presents a potential route of exposure to humans. The area is served by public water, however, the underlying aquifer is the source of the water supply for the Bowling Green Water District customers. An air stripping treatment system was constructed in 1996 to mitigate the impact of the groundwater contamination on the Bowling Green water supply wells. The Bowling Green water supply wells are routinely monitored for compliance with New York State Department of Health Drinking Water Standards. Presently, no site specific contaminants exceeding drinking water standards have been detected in the water distributed to the public. Early warning monitoring wells have been installed south of Old Country Road, in locations downgradient of the NCIA inactive hazardous waste disposal sites and upgradient of the water supply wells as a precautionary measure. Therefore, use of the groundwater in the area is not currently considered an exposure pathway of concern. Additionally, existing use and development restrictions preventing the use of groundwater as a source of potable or process water without necessary water quality treatment are required by the Nassau County Department of Health.

Currently, there are twelve (12) Class 2 sites in the NCIA. A Class 2 site is a site at which hazardous waste constitutes a significant threat to the environment or the public health and action is required. The Department has been using a three-prong strategy in remediating Class 2 sites in the NCIA. The first action identifies source areas at each site which will be remediated or removed; the second action includes the investigation and proper remediation of groundwater contamination at and beneath each site; and the third action is the ongoing efforts by the Department which include a detailed investigation of groundwater contamination that is migrating off-site from all Class 2 sites within the NCIA.

During the course of the investigation a certain action, known as an interim remedial measure (IRM), was undertaken at the 36 Sylvester Street Site in response to the threats identified above. An IRM



GMEI-00892

is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS. The IRM undertaken at this site included the removal of contaminated soil from an on-site drywell.

Based on the implementation of the above IRM, the findings of the investigation of this site indicate that the site no longer poses a significant threat to human health or the environment, therefore No Further Action was selected as the remedy for this site.

The selected remedy, discussed in detail in Section 6, is intended to attain the remediation goals identified for this site in Section 6. The remedy must conform with officially promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called SCGs.

## SECTION 2: SITE LOCATION AND DESCRIPTION

The 36 Sylvester Street Site, No. 1-30-043U is located at 36 Sylvester Street, Westbury, New York and is designated by the Nassau County Tax Assessors Office as Section 11, Block 77, Lots 21-24 and 56-59. The site is bounded by Sylvester Street to the west, New York Avenue to the east, and is approximately 400 feet north of Old Country Road. See Figures 1 and 2. The site is approximately 20,000 square feet with a 12,125 square feet, single-story masonry building. The remainder of the site consists of asphalt parking areas and concrete walkways. The site topography is flat. The site is located in the New Cassel Industrial Area (NCIA), a 170 acre industrial and commercial area, in the Town of North Hempstead, Nassau County. Currently, thirteen (13) Class 2 sites exist in the NCIA. The NCIA is highly developed and no significant surface water sources exist near the site. The nearest surface waters are small ponds within the Eisenhower Memorial Park located about two miles southwest of the site.

## SECTION 3: SITE HISTORY

### 3.1: Operational/Disposal History

The 36 Sylvester Street Site was initially developed around 1952 with a one-story, masonry building. The building was improved with an addition onto the eastern portion of the building in June 1953. The building covers most of the lot with the exception of alleys on the north and south portions of the site. Historically, the site was used for industrial applications that included the manufacturing of precision machinery. Former occupants of the site included American Express Field Warehousing Corp., Universal Transistor Products Corp., National Gear Products; and the current owner, Grand Machinery Exchange.

The building was originally serviced by an on-site sanitary disposal system that consisted of two drywells. The on-site sanitary disposal system was abandoned when the facility was connected to the municipal sewer system in January 1987. On-site chemical storage associated with the operations of previous occupants included cutting and lubricating oils, mineral spirits and waste oils. Presently, the site is operated by Gel-Tec, a division of Tishcon Corp., and used primarily as a warehouse unit by Gel-Tec.

## 3.2: Remedial History

In 1999, the NYSDEC listed the site as a Class 2 site in the Registry of Inactive Hazardous Waste Disposal Sites in New York. A Class 2 site is a site where hazardous waste presents a significant threat to the public health or the environment and action is required.

In 1986, the Nassau County Department of Health (NCDH) completed an investigation of groundwater quality and found the NCIA to be a major source of volatile organic chemical (VOC) contamination in groundwater. As a result of this investigation, the NYSDEC classified the entire NCIA as a Class 2 site in August 1988. The Class 2 designation indicates that the site poses a significant threat to the public health or the environment and requires action. In February 1995, the NYSDEC's consultant completed a site investigation report for the NCIA under the New York State Superfund program. Based on this report, the NYSDEC removed the NCIA from the Registry in March 1995. At the same time, five sites within the NCIA (not including the 36 Sylvester Street Site) were added to the Registry as individual Class 2 sites.

The site was subsequently listed on the Registry as a result of a NYSDEC investigation. The Site Investigation Report is available for review at the document repositories.

## SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The NYSDEC and Grand Machinery Exchange, Inc. entered into a Consent Order on March 8, 2000. The Order obligates the responsible parties to implement a RI/FS remedial program.

## SECTION 5: SITE CONTAMINATION

A remedial investigation/feasibility study (RI/FS) has been conducted to evaluate the alternatives for addressing the significant threats to human health and the environment.

## 5.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site.

The RI was conducted in two phases. The first phase, conducted between August 2000 and November 2000, provided a site survey and preliminary evaluation of the site. A report entitled Focused Remedial Site Survey Report, dated November 20, 2000, has been prepared which describes the field activities and findings of the site survey portion of the RI in detail. The main investigation, with sampling locations chosen based on the Focused Remedial Site Survey Report, took place from June 2001 to August 2001. The RI report was finalized in September 2002, after evaluation of the IRM carried out on May 9, 2002.

The following activities were conducted during the RI:

- An exterior inspection to identify drainage structures, loading areas, utility service entrances, vents and sanitary connections.

- An interior inspection to determine current building uses, facility locations, discontinuities indicative of prior plumbing arrangements and any items that warranted further investigation using remote sensing and/or destructive survey methods.

- A geophysical survey employing ground penetrating radar (GPR) was performed to determine the locations of underground structures, pipes and storage tanks.

- Destructive surveys to expose subsurface structures including two abandoned drywells associated with the former on-site sanitary disposal system, floor drains in the southeastern portion of the warehouse, a concrete patch in the southeastern portion of the warehouse, and the interior roof drainage pipe with open ports in the southern portion of the warehouse.

- Soil samples were taken by Geoprobe® at two locations at six depths from 18 to 45 feet below ground surface (bgs). Both locations were in or near drywells associated with the former on-site sanitary disposal system.

- Groundwater samples were taken at seventeen locations by Geoprobe® at three depths ranging form 60 to 80 feet bgs.

To determine whether the soil and groundwater contains contamination at levels of concern, data from the investigation were compared to the following SCGs:

- Groundwater, drinking water and surface water SCGs are based on the NYSDEC "Ambient Water Quality Standards and Guidance Values" and Part 5 of the New York State Sanitary Code.

- Soil SCGs are based on the NYSDEC "Technical and Administrative Guidance Memorandum (TAGM) 4046; Determination of Soil Cleanup Objectives and Cleanup Levels".

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized below. More complete information can be found in the RI Report.

### 5.1.1: <u>Site Geology and Hydrogeology</u>

The site's surface is basically paved. Beneath the site are two water bearing layers, the Upper Glacial Aquifer over the Magothy Aquifer. The Upper Glacial Aquifer (UGA) consists of Upper Pleistocene deposits of poorly sorted sands and gravel found from the surface to a depth of approximately 80 ft bgs. The UGA is an unconfined aquifer consisting of poorly sorted sands and gravels. Beneath the UGA lies the Magothy consisting of finer sands, silt and small amounts of clay.

Usually, the upper surface of the Magothy formation is found at least 100 ft bgs. However, based on observations during well installation for this investigation, the Magothy is found in the NCIA at significantly shallower depths (60-87 ft bgs) than in many other areas of Long Island. Similarly, the UGA and the Magothy are usually separated by a clay aquitard but in this area the UGA and the Magothy are in direct hydraulic connection. Depth to groundwater is about 55 ft bgs in the area of the site and groundwater flows in a southwesterly direction. Both the UGA and Magothy have been designated as sole-source aquifers and are protected under state and federal legislation.

### 5.1.2: Nature of Contamination

As described in the RI report, soil and groundwater samples were collected at the site to characterize the nature and extent of contamination. As summarized in Tables 1, 2, and 3, and the text below, the main categories of contaminants which exceed their SCGs are volatile organic compounds (VOCs) and inorganics (metals).

The VOCs of concern are 1,1-dichloroethene, 1,1-dichloroethane, 1,1,1-trichloroethane, tetrachloroethane, 1,4-dichlorobenzene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

The inorganics (metals) of concern are chromium, copper, mercury and zinc.

### 5.1.3: Extent of Contamination

This section describes the findings of the investigation for all environmental media that were investigated.

Chemical concentrations are reported in parts per billion (ppb) for water and parts per million (ppm) for soil. For comparison purposes, where applicable, SCGs are provided for each medium.

The following are the media which were investigated and a summary of the findings of the investigation.

#### Subsurface Soil

Soil samples were taken at the locations corresponding to the two drywells (UIW-001 and UIW-002) located at the site's southwest corner. See Figure 3 for the location of the drywells. At each drywell location, soil samples were taken at six depths, from 18 ft bgs to 45 ft bgs. The greatest contamination was found in drywell UIW-001 at a depth of 18 ft bgs. VOC contaminants detected included 55 ppb of tetrachloroethylene, 900 ppb of 1,4- dichlorobenzene, 93 ppb of 1,3,5-trimethylbenzene and 140 ppb of 1,2,4- trimethyl benzene. Soil cleanup guidelines were not exceeded for VOC contaminants. The principle groundwater contaminants at the site; 1,1,1-trichloroethane, 1,1-dichloroethene, 1,1-dichloroethane and trichloroethene, were not detected in subsurface soil sampling during the RI. Metals exceeding soil cleanup guidelines were found in UIW-001 and include chromium (81.3 ppm), copper (961 ppm), mercury (1.75 ppm) and zinc (331 ppm). The soil cleanup guidelines for chromium, copper, mercury and zinc are 10 ppm, 25 ppm, 0.1 ppm and 20 ppm, respectively.

### Groundwater

Groundwater samples were taken by Geoprobe® at 17 locations. Sampling was done at three depths at each location: 60, 70 and 80 ft bgs. The highest level of VOC contamination was found at 60 ft bgs at GP-007, located on the eastern side of the site. At this location, total VOCs were 4,670 ppb, with the highest contaminant being 1,1,1- trichloroethane at 2,500 ppb. See Figures 3, 4 and 5 for groundwater sampling locations and contaminant concentrations at the site. Tables 1, 2 and 3 give contaminant concentrations for water samples taken at each of the 17 locations at 60, 70 and 80 ft. bgs.

The two drywells UIW-001 and UIW-002 would be the most likely source of VOC groundwater contamination at the site. However, contaminant concentrations were typically highest at sampling locations east of the drywells and much lower to the west. If the drywells were the source of the groundwater contamination found beneath the site, the contamination would be greater to the west and less to the east (groundwater at the site flows from northeast to southwest). VOC contamination with the same constituents as the on-site contamination is also found directly upgradient of the site. Additionally, as noted above, the primary constituents of the groundwater contamination at the site (1,1,1- trichloroethane, 1,1-dichloroethene, 1,1-dichloroethane and trichloroethene) were not found in on-site subsurface soils. There are two Class 2 sites located upgradient and to the east of the subject site, which are associated with the VOC contaminants found in groundwater at the site.

### 5.2: Interim Remedial Measures

An Interim Remedial Measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS.

An IRM was completed at the 36 Sylvester Street Site on May 9, 2002 to address the metals and VOC contamination described in the RI report as UIW-001. This drywell was uncovered and accessed using an excavator (backhoe).

The contaminated soil contained within the drywell was excavated to a depth of about twenty (20) feet bgs. The well structure was left in place. The excavation was then backfilled with clean soil to grade. Approximately fifteen (15) cubic yards of contaminated soil was removed from the drywell and stored in a proper waste container for subsequent off-site disposal. The contaminated material, sent to RGM, Inc. of Deer Park, New York,. was transported and disposed in accordance with Title 6 NYCRR Part 371 and EPA 40 CFR 261 criteria.

One endpoint sample was taken after excavation from the bottom of drywell UIW-001. The laboratory analysis of the soil sample failed to detect any volatile or semi-volatile organic contaminants above minimum detection limits. The laboratory analysis did detect metal contamination, however the concentrations were below the applicable SCGs.

The drywell identified as UIW-002 was uncovered and accessed utilizing an excavator (backhoe). No remedial activities were required with respect to this structure. The structure was accessed for proper abandonment procedures, including backfilling of UIW-002 with clean soil to grade.

## 5.3: Summary of Human Exposure Pathways

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the health risks can be found in Section 5 of the RI report.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

The source of contamination is the location of contaminant release to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway are documented. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

Pathways which are known to or may exist at the site include:

- Ingestion of contaminated groundwater.

The contaminated groundwater at the site and within the entire NCIA represents a potential route of exposure to humans. The Bowling Green Water District provides public water to the area. Supply wells for this water district are located downgradient of the NCIA and these wells have been impacted by contamination. In 1996, an air stripping treatment system was constructed to treat the water supply wells. The Bowling Green Water District system is routinely monitored for compliance with New York State Drinking Water Standards. No site related contaminants have been detected exceeding drinking water standards in the water distributed to the public. Monitoring wells have been installed up-gradient of the water supply wells as a precautionary measure to detect any migrating plumes that could impact the well field above the capacity of the treatment system. Additionally, existing use and development restrictions preventing the use of groundwater as a source of potable or process water without necessary water quality treatment are required by the Nassau County Department of Health. With these measures in place, the use of the groundwater in the area is not currently considered an exposure pathway of concern.

### 5.4: Summary of Environmental Exposure Pathways

This section summarizes the existing and potential future environmental impacts presented by the site. Environmental impacts include existing and potential future exposure pathways to fish and wildlife receptors, as well as damage to natural resources such as aquifers and wetlands.

Virtually every open space in the NCIA has been covered by asphalt, concrete or buildings. Since the industrial area is highly developed, no known wildlife habitat exists in or near the site. Due to the density of commercial and industrial buildings in the NCIA, there are no significant sources of surface water in close proximity to the site. The nearest surface water sources are several small ponds in and around Eisenhower Memorial Park, approximately two miles southwest of the site across Old Country Road.

The contaminated groundwater found within the NCIA does present a potential route of exposure to the environment, however, no known exposure pathway of concern between the contaminated groundwater and the environment exist. Consequently, the potential for plants or animal species being exposed to site related contaminants is minimal.

## SECTION 6: SUMMARY OF THE REMEDIAL GOALS AND SELECTED REMEDY

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

Prior to the completion of the IRM described in Section 5.2, the remediation goals for this site were to eliminate or reduce to the extent practicable:

- exposures to persons at or around the site to metals in contaminated drywell sediments.
- the release of contaminants from soil into groundwater that may create exceedances of groundwater quality standards

The NYSDEC believes that the IRM has accomplished these remediation goals.

Based on the results of the investigations at the site, the IRM that has been performed, and the evaluation discussed below, the NYSDEC has selected No Further Action as the remedy for the site. The NYSDEC will also delist the site from the New York Registry of Inactive Hazardous Waste Disposal Sites.

The basis for this selection is the NYSDEC's conclusion that No Further Action will be protective of human health and the environment and will meet all SCGs. Overall protectiveness is achieved through meeting the remediation goals listed above. The only area on the site found to be contaminated with hazardous materials or metals in exceedance of SCGs was the drywell area identified as UIW-001, which was addressed by the IRM. The IRM has successfully removed all on-site soil contaminants found to be in exceedance of SCGs at the site. Since there are no longer



GMEI-00899

any soil contaminants in exceedance of SCGs, there no longer exists a possibility of ingesting, inhaling or contacting such materials. Additionally, since no on-site source remains, there is no longer a possibility of the site contributing to the contaminated groundwater plumes within the NCIA, either beneath or downgradient of the site. The majority of the on-site groundwater VOC contamination is not attributed to the site.

The main SCGs applicable to this project are as follows:

- NYSDEC TAGM 4046 (metals in soils). The removal of contaminated material from UIW-001 has addressed the only known possible on-site source area for soil and groundwater contamination.

Therefore, the NYSDEC concludes that the IRM already completed has achieved the remediation goals for the site and that No Further Action is needed.

## SECTION 7: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- Repositories for documents pertaining to the site were established.

- A public contact list, which included nearby property owners, elected officials, local media and other interested parties, was established.

- A public meeting was held on December 12, 2002 to present and receive comment on the PRAP.

- Public information meetings regarding the entire New Cassel Industrial Area were held in May 1995, January 1996, May 1996, October 1996, May 1997, December 1997, May 1998, December 1998, May 1999, September 1999, February 2000, May 2000, January 2001, and December 2001.

- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.

No significant public comments were received.

Table II
Site # 1-30-043U - 36 Sylvester Street
August 2001 Groundwater Sampling Results
Volatile Organic Compounds (in ppb)
Groundwater Samples Collected At 60 Feet

| Analytes | 1,1-Dichloroethene | Methylene Chloride | 1,1-Dichloroethane | 1,1,1-Trichloroethane | Trichloroethene | 1,1,2-Trichloroethane | Tetrachloroethene |
|---|---|---|---|---|---|---|---|
| SCG (ppb) | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Sample ID | | | | | | | |
| UPGRADIENT | | | | | | | |
| GP-003 | 34.0 | ND | 68.0 | 180 E | 320 E | ND | 33.0 |
| GP-004 | 130 E | ND | 220 E | 850 E | 1,100 E | ND | 37.0 |
| GP-005 | 200 E | ND | 570 E | 940 E | 240 E | ND | 13.0 |
| GP-006 | 550 E | ND | 580 E | 1,900 E | 360 E | ND | 38.0 |
| GP-007 | 600 E | ND | 930 E | 2,500 E | 310 E | ND | 32.0 |
| GP-011 | 16.0 | 10 B | 21.0 | 59 B | 4.0 | ND | 4.7 |
| GP-012 | 10.0 | 5.1 B | 43.0 | 13 B | ND | ND | ND |
| GP-013 | 16.0 | 3.4 B | 73.0 | 45 B | 3.6 | ND | 3.3 |
| GP-014 | 9.6 | 4.2 B | 22.0 | 15 B | 12.0 | ND | 1.4 |
| GP-015 | 32.0 | 5.1 B | 60.0 | 80 B | 560 E | ND | 36.0 |
| GP-016 | 33.0 | 5.7 B | 31.0 | 130 E | 230 E | ND | 29.0 |
| GP-017 | 22.0 | 4.8 B | 21.0 | 120 E | 100 E | ND | 25.0 |
| ON-SITE | | | | | | | |
| UIW-001 | 320.0 | ND | ND | 2400 E | 170 E | 0.9 | 15.0 |
| UIW-002 | 240.0 | ND | ND | 2,500 E | 120 E | ND | 49.0 |
| DOWNGRADIENT | | | | | | | |
| GP-008 | 290 E | ND | 420 E | 1,500 E | 410 E | ND | 21.0 |
| GP-009 | 390 E | 12 B | 480 E | 770 E | 380 E | ND | 34.0 |
| GP-010 | 130.0 | 43 B | 340.0 | 110 B | 150.0 | ND | 21.0 |

**Only detected compounds are reported**

**Notes: All results are in ug/L (parts per billion - ppb)**

**ND = Non-detectable above the analytical method detection limit (MDL)**
**J = Indicates an estimated value which is less than the specified detection limit but greater than zero**
**E = Indicates the analyte concentration exceeds the instrument calibration limits**
**B = Indicates the analyte was found in both the sample and associated laboratory blank**
**- = Indicates no standard available for the specified compound**

GMEI-00901

**Table 2**
**Site # 1-30-043U - 36 Sylvester Street**
**August 2001 Groundwater Sampling Results**
**Volatile Organic Compounds (in ppb)**
**Groundwater Samples Collected At 70 Feet**

| Analytes | 1,1-Dichloroethene | Methylene Chloride | 1,1-Dichloroethane | 1,1,1-Trichloroethane | Trichloroethene | 1,1,2-Trichloroethane | Tetrachloroethene |
|---|---|---|---|---|---|---|---|
| SCG (ppb) | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Sample ID | | | | | | | |
| UPGRADIENT | | | | | | | |
| GP-003 | 12.0 | ND | 15.0 | 43.0 | 44.0 | ND | ND |
| GP-004 | 33.0 | ND | 82.0 | 140 E | 420 E | ND | 17.0 |
| GP-005 | 53.0 | ND | 76.0 | 200 E | 960 E | ND | 41.0 |
| GP-006 | 52.0 | ND | 47.0 | 230 E | 610 E | ND | 42.0 |
| GP-007 | 82.0 | ND | 54.0 | 280E | 870 E | ND | 50.0 |
| GP-011 | 13.0 | 8.7 B | 21.0 | 53 B | 3.7 | ND | 3.3 |
| GP-012 | 8.5 | 8.7 B | 8.4 | 8 B | ND | ND | ND |
| GP-013 | 4.9 | 3 B | ND | 5.2 B | 1.6 | ND | ND |
| GP-014 | 6.2 | 2.9 B | ND | 9.3 B | 9.5 | ND | 1.0 |
| GP-015 | 26.0 | 4.5 B | 29.0 | 100 B | 490 E | ND | 20.0 |
| GP-016 | 32.0 | 6.6 B | 48.0 | 160 E | 190 E | ND | 21.0 |
| GP-017 | 26.0 | 6.8 B | 17.0 | 60 B | 140 E | ND | 12.0 |
| ON-SITE | | | | | | | |
| UIW-001 | 1,000 E | ND | 130E | 1,800 E | 520 E | ND | 61.0 |
| UIW-002 | 450 E | ND | 61.0 | 2,400 E | 470 E | 2.4 | 40.0 |
| DOWNGRADIENT | | | | | | | |
| GP-008 | 380 E | ND | 450 E | 1,900 E | 660 E | ND | 44.0 |
| GP-009 | 400 E | 11 B | 400 E | 710 E | 500 E | ND | 48.0 |
| GP-010 | 92.0 | 9.4 E | 170 E | 260 E | 120 E | 3.3 | 18.0 |

**Only detected compounds are reported.**

**Notes: All results are in ug/L (parts per billion - ppb)**

**ND = Non-detectable above the analytical method detection limit (MDL)**
**J = Indicates an estimated value which is less than the specified detection limit but greater than zero**
**E = Indicates the analyte concentration exceeds the instrument calibration limits.**
**B = Indicates the analyte was found in both the sample and associated laboratory blank**
**- = Indicates no standard available for the specified compound**

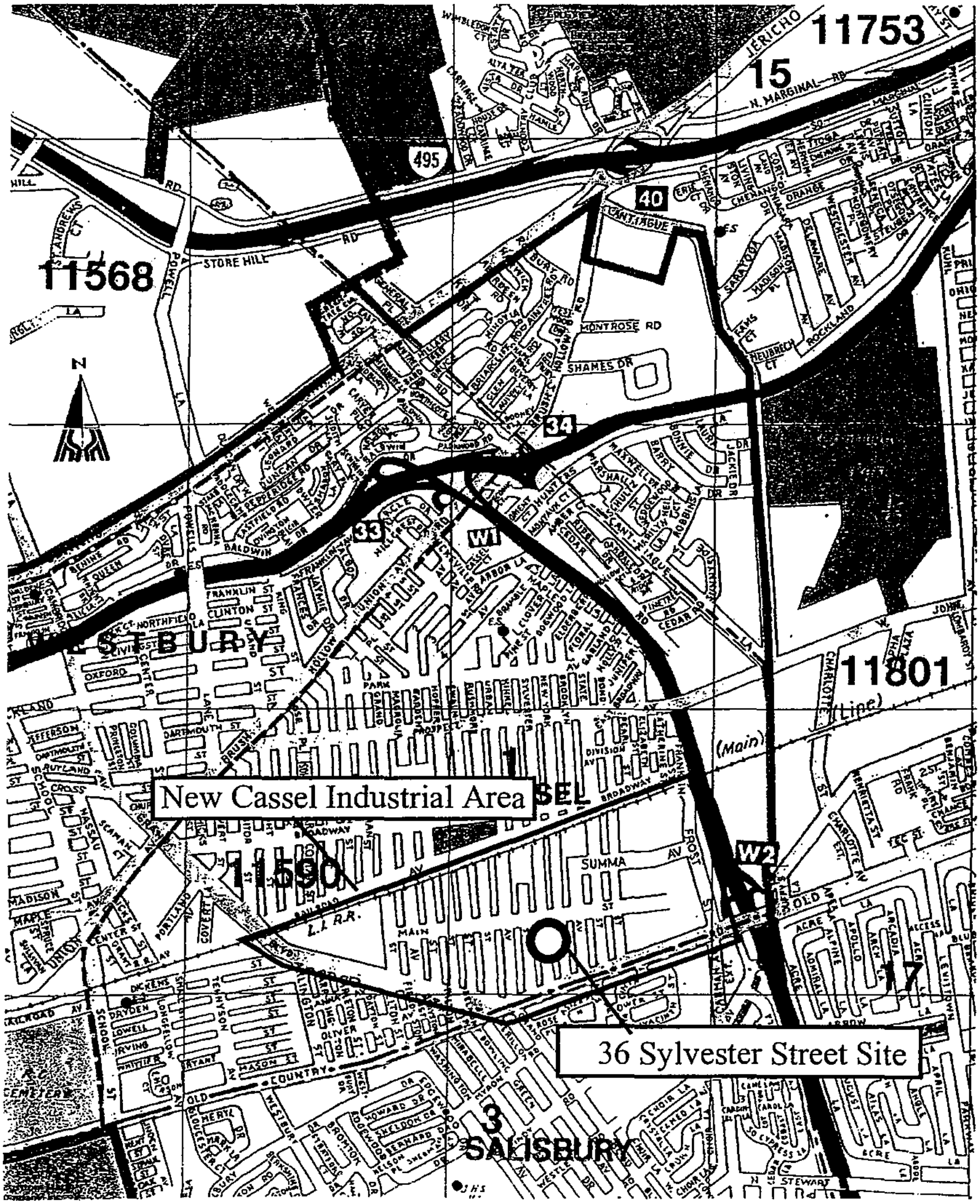
Table 3
Site #1-30-043U - 36 Sylvester Street
August 2001 Groundwater Sampling Results
Volatile Organic Compounds (in ppb)
Groundwater Samples Collected At 80 Feet

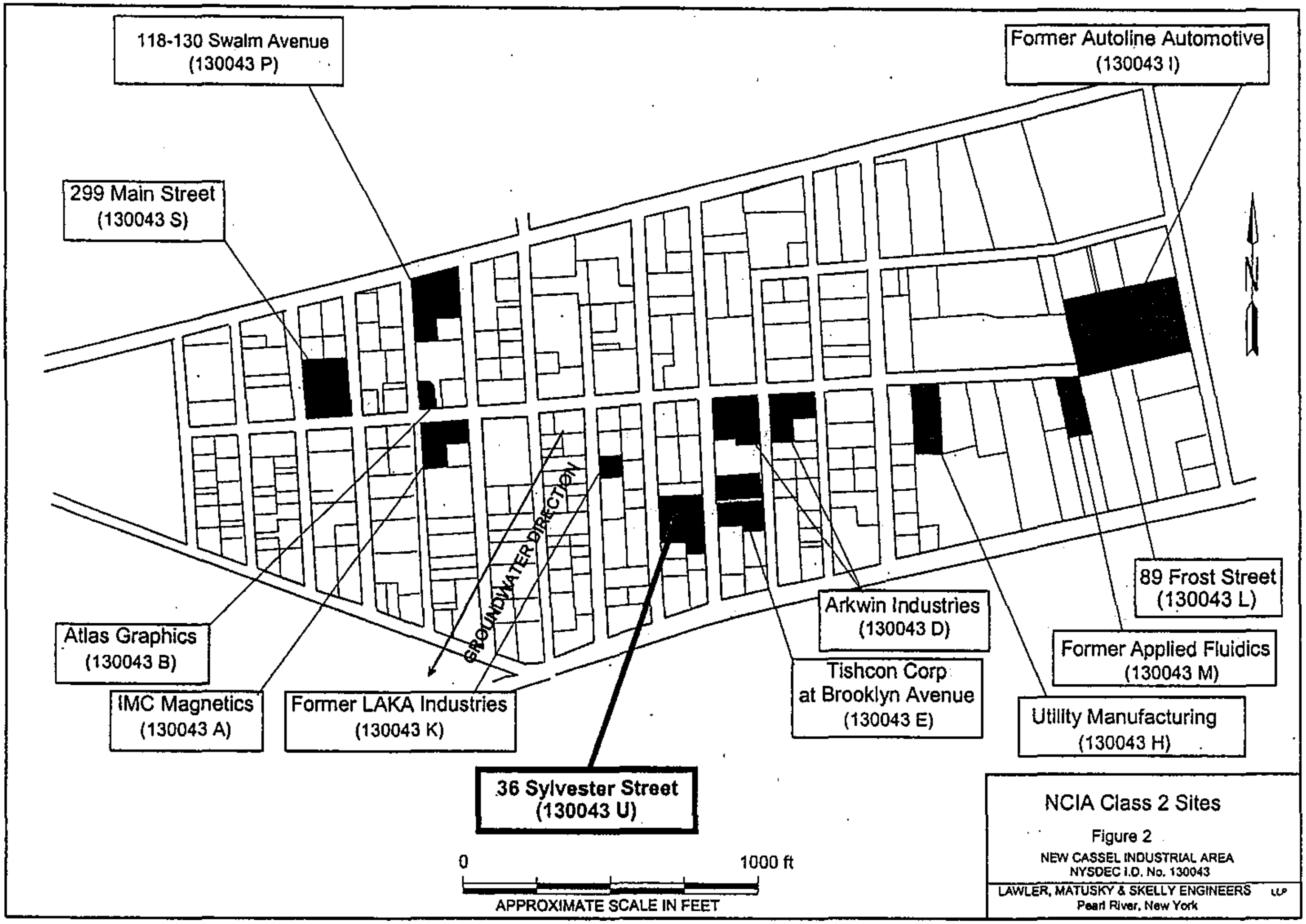
| Analytes | 1,1-Dichloroethene | Methylene Chloride | 1,1-Dichloroethane | 1,1,1-Trichloroethane | Trichloroethene | 1,1,2-Trichloroethane | Tetrachloroethene |
|---|---|---|---|---|---|---|---|
| SCG (ppb) | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Sample ID | | | | | | | |
| UPGRADIENT | | | | | | | |
| GP-003 | 5.6 | ND | ND | 17.0 | 14.0 | ND | ND |
| GP-004 | 21.0 | ND | 26.0 | 59 B | 93.0 | ND | 4.7 |
| GP-005 | 17.0 | ND | 8.2 | 45 B | 600 E | ND | 16.0 |
| GP-006 | 42.0 | ND | 37.0 | 140 E | 450 E | ND | 14.0 |
| GP-007 | 77.0 | ND | 68.0 | 290 E | 1,200 E | ND | 72.0 |
| GP-011 | 14.0 | 8.9 B | 21.0 | 55.0 | 4.8 | ND | 4.0 |
| GP-012 | 9.4 | 8.7 B | 3.3 | 16 B | 1.1 | ND | 1.4 |
| GP-013 | ND | 9 B | ND | 4.4 B | ND | ND | ND |
| GP-014 | 9.4 | 3.2 B | ND | 10 B | 11.0 | ND | 1.3 |
| GP-015 | 14.0 | 4.1 B | 5.4 | 31 B | 140 E | ND | 6.3 |
| GP-016 | 31.0 | 5 B | 34.0 | 150 E | 190 E | ND | 24.0 |
| GP-017 | 23.0 | 6.9 B | 12.0 | 51 B | 220 E | ND | 13.0 |
| ON SITE | | | | | | | |
| UIW-001 | 130 E | ND | 90 | 330 E | 240 E | 3.7 | ND |
| UIW-002 | 61.0 | ND | 79.0 | 330 E | 1,100 E | ND | 57.0 |
| DOWNGRADIENT | | | | | | | |
| GP-008 | 78.0 | ND | 62.0 | 240 E | 1,300 E | ND | 60.0 |
| GP-009 | 170 E | 9.7 B | 140 E | 440 E | 700 E | 2.7 | 66.0 |
| GP-010 | 77.0 | 9.9 B | 130 E | 250 E | 13.0 | 2.4 | 15.0 |

Only detected compounds are reported

Notes: All results are in ug/L (parts per billion - ppb)
ND = Non-detectable above the analytical method detection limit (MDL)
J = Indicates an estimated value which is less than the specified detection limit but greater than zero
E = Indicates the analyte concentration exceeds the instrument calibration limits
B = Indicates the analyte was found in both the sample and associated laboratory blank
• = Indicates no standard available for the specified compound

Figure 1 - Site Location Map





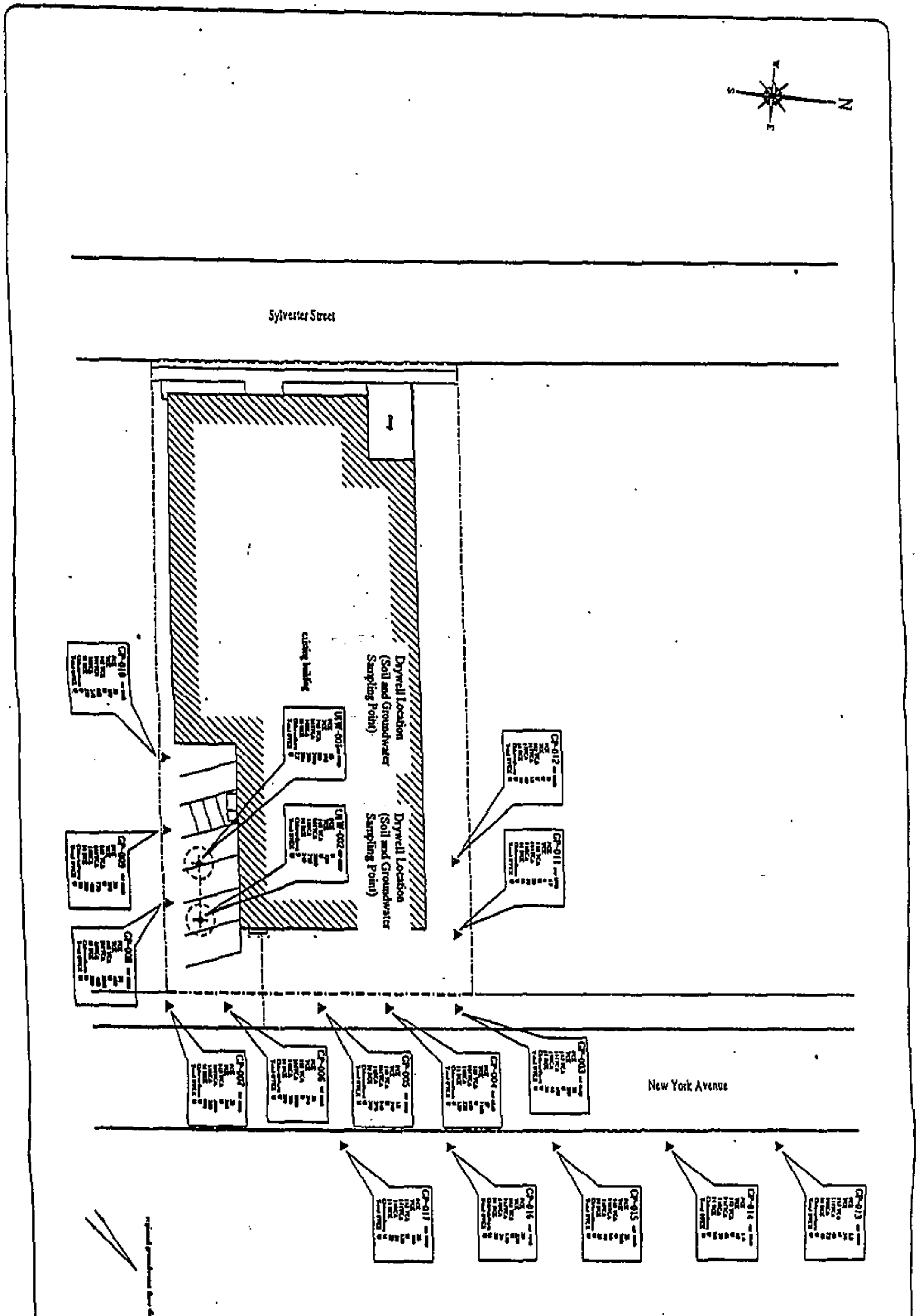

NCIA Class 2 Sites

Figure 2

NEW CASSEL INDUSTRIAL AREA
NYSDEC I.D. No. 130043

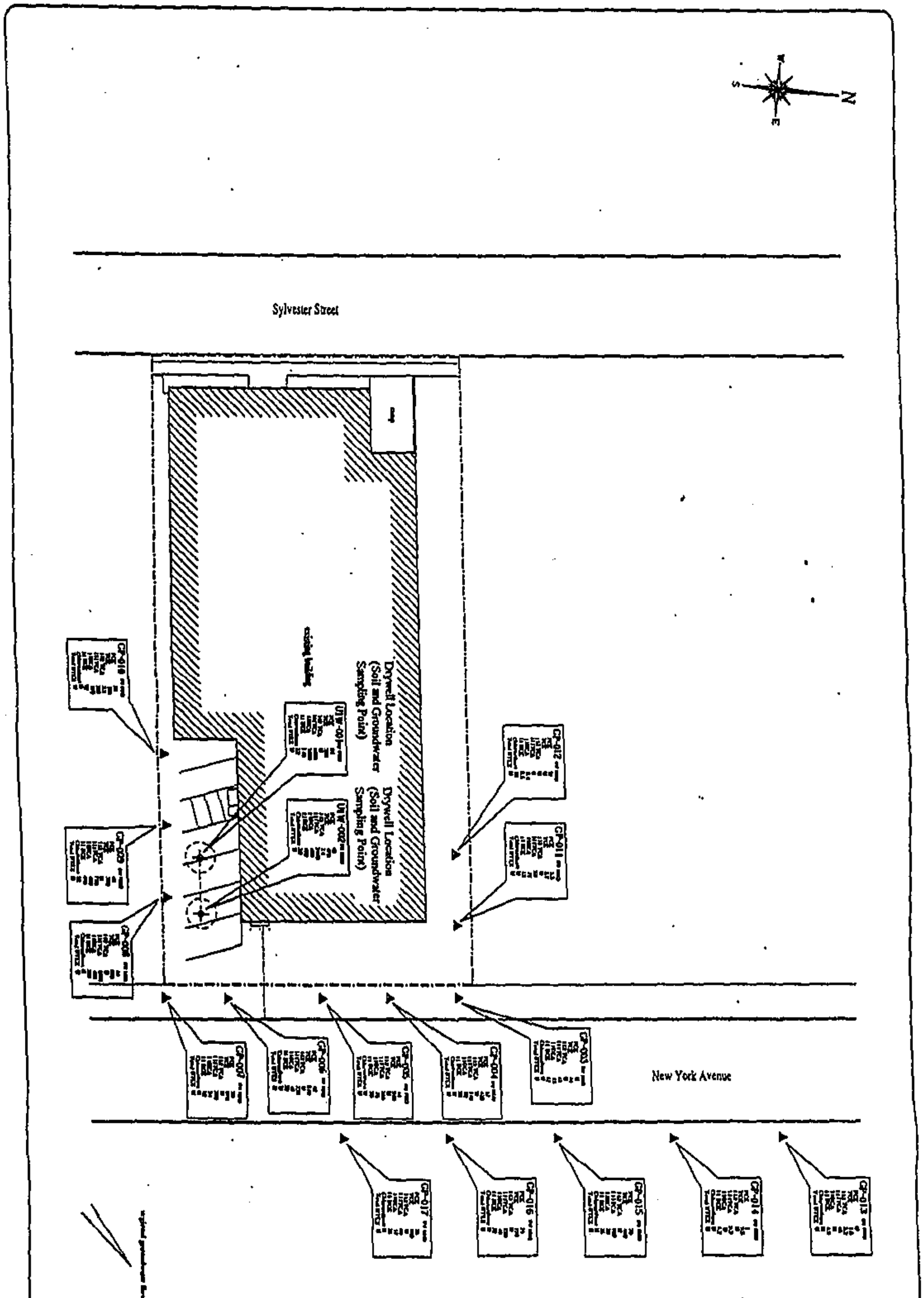
LAWLER, MATUSKY & SKELLY ENGINEERS LLP
Pearl River, New York

GMEI-00905




All sample results shown are groundwater sampling results.
Sampling results are in parts per billion (ppb).

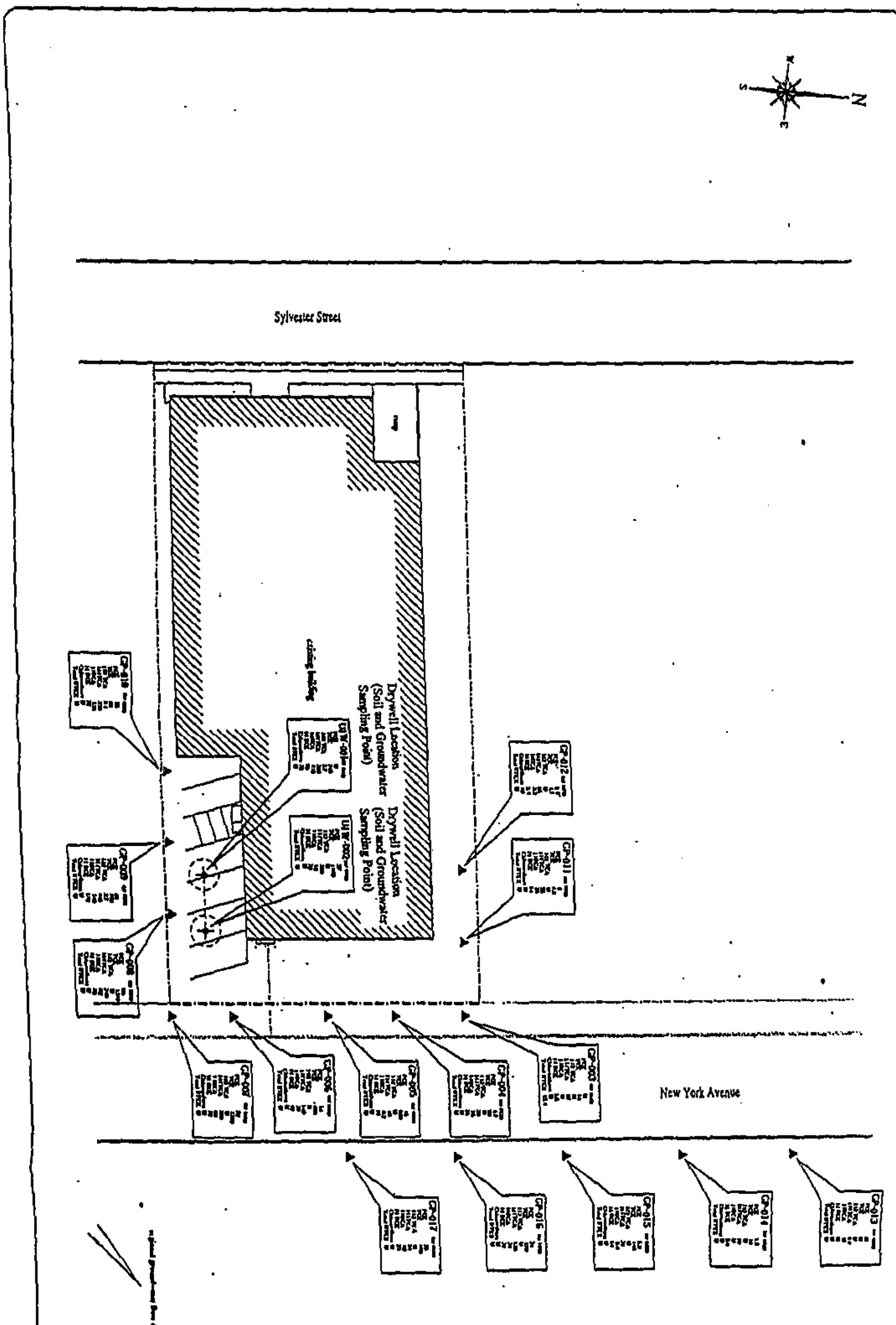
| IMPACT ENVIRONMENTAL | 36 Sylvester Street Site 01-30-043U | Legend |
| --- | --- | --- |
| a division of Impact Environmental Consulting Inc.<br>1 Village Plaza<br>Kings Park, New York 11754 | Figure 3: Analyte Concentration Map -60'<br>And Soil Sampling Point Locations | soil and groundwater probe node<br>groundwater probe node<br>Underground Injection Well<br>scale: 1" = 30' |




All sample results shown are groundwater sampling results.
Sampling results are in parts per billion (ppb).

| IMPACT ENVIRONMENTAL | 36 Sylvester Street Site 01-30-043U | Legend |
|---|---|---|
| a division of Impact Environmental Consulting Inc. | Figure 4: Analyte Concentration Map-70' | soil and groundwater probe node |
| 1 Village Plaza | Westbury, New York | groundwater probe node |
| Kings Park, New York 11754 | | Underground Injection Well |
| | | scale: 1" = 30' |

GMEI-00907




All sample results shown are groundwater sampling results.
Sampling results are in parts per billion (ppb).

| | | |
|---|---|---|
| IMPACT ENVIRONMENTAL<br>a division of Impact Environmental Consulting Inc.<br>1 Village Plaza<br>Kings Park, New York 11754 | 36 Sylvester Street Site 01-30-043U<br>Figure 5': Analyte Concentration Map-80'<br>*Westbury, New York* | Legend<br>soil and groundwater probe node<br>groundwater probe node<br>Underground Injection Well<br>scale: 1" = 30' |

GMEI-00908

# APPENDIX A

## Responsiveness Summary

# RESPONSIVENESS SUMMARY

**36 Sylvester Street**
**Town of North Hempstead, Nassau County, New York**
**Site No. 1-30-043U**

The Proposed Remedial Action Plan (PRAP) for the 36 Sylvester Street site, was prepared by the New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on December 1, 2002. The PRAP outlined the remedial measure proposed for the contaminated soil at the 36 Sylvester Street site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on December 12, 2002, which included a presentation of the Remedial Investigation (RI) and the Feasibility Study (FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on December 27, 2002.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the NYSDEC's responses:

**COMMENT 1:** At what addresses are treatment systems for the upgradient Arkwin site installed?

**RESPONSE 1:** The treatment systems are installed for 648, 656, 662 and 670 Main Street buildings, and for the building at 66 Brooklyn Avenue.

**COMMENT 2:** Are all NCIA sites used for different purposes than those that resulted in contamination.

**RESPONSE 2:** Many, but not all, of the listed sites in the NCIA now have different usages than when the disposal took place that resulted in the sites being listed in the New York State Registry of Inactive Hazardous Waste Disposal Sites.

# APPENDIX B

## Administrative Record

# ADMINISTRATIVE RECORD

**36 Sylvester Street**
**Town of North Hempstead, Nassau County, New York**
**Site No. 1-30-043U**

1. Proposed Remedial Action Plan for the 36 Sylvester Street site, dated November 2002, prepared by the NYSDEC.

2. Order on Consent, Index No. W1-0863-00-01, between NYSDEC and Grand Machinery Exchange, Inc, executed on 03/08/00.

3. Referral Memorandum dated September 7, 1999 for a preliminary site assessment of the 36 Sylvester Street site.

4. New York State Superfund Contract, Site Investigation Report, New Cassel Industrial Area Site, Work Assignment No. D002676-2.2, Lawler, Matusky and Skelly Engineers, February, 1995.

5. Comprehensive Citizen Participation Plan, New Cassel Industrial Area Site, Site ID: 1-30-043, New York State Department of Environmental Conservation, November 1995.

6. New Cassel Industrial Area Offsite Groundwater Remedial Investigation/Feasibility Study (RI/FS) Report, Volumes I, II and III, Lawler, Matusky and Skelly Engineers, September 2000.

7. "Focused Remedial Investigation Work Plan for the 36 Sylvester Street Site", February 2001, prepared by Impact Environmental.

8. "Interim Remedial Measures Work Plan for the 36 Sylvester Street Site", April 2002, prepared by Impact Environmental.

9. "Focused Remedial Investigation Report for the 36 Sylvester Street Site", November 2002, prepared by Impact Environmental.

10. 36 Sylvester Street Site Proposed Remedial Action Plan Fact Sheet, NYSDEC, November 2002.

# FARRELL FRITZ, P.C.

290 Broad Hollow Road
Melville, NY 11747
Phone: (631) 547-8400
Fax: (631) 547-0501

EAB Plaza
Uniondale, New York 11556-0120
PHONE: (516) 227-0700
FACSIMILE: (516) 227-0777
www.farrellfritz.com

2488 Montauk Highway
P.O. Box 1980
Bridgehampton, NY 11932
Phone: (631) 537-3100
Fax: (631) 537-5049

August 25, 2003

CHARLOTTE BIBLOW
PARTNER
DIRECT DIAL: (516) 227-0686
DIRECT FAX: (516) 336-2266
cbiblow@farrellfritz.com

OUR FILE NUMBER
16606-100

**VIA CERTIFIED MAIL - RRR**

Mr. Joseph G. Jones
Project Manager
New York State Department of Environmental Conservation
625 Broadway, 11th Floor
Albany, New York 12233-7015

Re: **Grand Machinery, 36 Sylvester Street**
**Site # 1-30-043U, New Castle Industrial Area**

Dear Mr. Jones:

We represent Grand Machinery Exchange, the owner of the 36 Sylvester Street site mentioned above. We are writing to advise you of an error in the most recent Proposed Remedial Action Plan ("PRAP"). On page 10 of that document, you indicate that the 36 Sylvester Street site is approximately one acre. That is incorrect. The site is 0.4591 acres (20,000 square feet). Attached is a listing of the property from the Nassau County Assessor's Office which documents the size of the property. In addition, the reports previously submitted to the Department indicate that it is 20,000 square feet. Furthermore in figure two of the PRAP, you have the 36 Sylvester Street site as being a Class 2 site. That is also incorrect. As indicated in the PRAP, pursuant to a Record On Decision issued in March 2003, that site has now been delisted. Accordingly I would appreciate you updating your figure to indicate the correct status of the property.

Thank you for your attention to this matter.

Very truly yours,

Charlotte Biblow

Charlotte Biblow

CB/sd
Enc.
cc: Chittibabu Vasudevan, PhD, PE (w/enc.)
Alali Tamuno, Esq. (w/enc.)
Paul Merandi (w/enc.)

FFDOCS1\541527.01

HELI

NASSAU COUNTY
LONG ISLAND NY

Home Property Search

RECORD DETAILS

Address Section,Block,Lot

- Parcel Data
- Residential
- Commercial
- Other Buildings
- Values
- Sketch
- Photo

**11077 00210**

**36 SYLVESTER ST**

Ret

## Parcel

| | |
|---|---|
| Property Location | 36 SYLVESTER ST |
| Parcel ID | 11077 00210 |
| Classification | COMMERCIAL |
| Land Use Code | 4-Light Manufacturing, Small Factory Bld |
| Land Area (acres) | .4591 |
| School District | WESTBURY UFSD |
| Municipality | NORTH HEMPSTEAD |